



ROUND 3

BEHAVIORAL SURVEILLANCE SURVEY

ZAMBIA, 2006

LONG DISTANCE TRUCK DRIVERS IN TRANSPORTATION ROUTES

WITH TREND ANALYSIS 2000-2006



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SURVEY EXECUTED BY:

Family Health International (FHI) with Consultants

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EXECUTIVE SUMMARY

Background

Zambia is one of the countries hardest hit by the HIV epidemic with a national prevalence of 16 percent among the 15-49 year age group. HIV/AIDS has not only compounded the country's health problems, but has had far-reaching socio-economic consequences. The increasing poverty levels, partly a result of high unemployment, have fuelled the spread of the epidemic especially among women. HIV rates are particularly high along major highways and border posts.

In 1999, the Corridors of Hope Project (formerly called the Cross Border Initiative Project) was initiated to target long distance truck drivers, uniformed personnel and female sex workers in seven of the major border sites and truck stops in Zambia. These sites are: Chirundu, Kapiri Mposhi, Kasumbalesa, Katete/Chanida, Livingstone/Kazungula and Nakonde. In 2004, the project expanded to three more sites namely Chipata, Lusaka and Ndola bringing the number of project sites to ten. The project, funded by USAID and JICA, is implemented by a partnership between World Vision, Society for Family Health and Zambia Health Education Communication Trust through Family Health International. The project aims at behavior change, social marketing of condoms and improved management of sexually transmitted infections in the targeted sites.

As a means of monitoring the Corridors of Hope (COH) project, behavioural surveillance is done through repeated behavioural surveillance surveys (BSSs) among female sex workers (FSWs) and their male clients. The Round 1 BSS was conducted in 2000 among truck drivers only. The Round 2 BSS, conducted in 2003, included truck drivers, uniformed personnel, light truck and mini bus drivers.

A third round of BSS has been carried out in 2006 among long distance truck drivers passing through two of the border project sites, Chirundu and Livingstone/Kazungula, and one inland site, Kapiri Mposhi. Long distance truck drivers (LDTDs) at two of these sites, Chirundu and Livingstone, have participated in all the three BSSs.

The general objective of this third round of BSS was to monitor the outcomes of existing prevention interventions through a cross-sectional assessment of risk behaviors among long distance truck drivers.

Secondary objectives included:

- To add and strengthen the monitoring system that will track behavioural trend data for high risk and vulnerable target groups;
- To provide information on behavioural trends among long distance truck drivers in some of the catchment areas of the project;
- To provide information to help guide HIV prevention programme planning;
- To provide evidence of the relative success of the combination of HIV prevention efforts taking place in selected sites;
- To obtain data in a standardised format, which will enable comparison with other BSSs carried out in other countries

Methodology

The BSS consisted of a cross-sectional survey conducted among long distance truck drivers who are considered to be clients of FSWs. The three selected project sites were: Chirundu and Livingstone, which border with Zimbabwe, and Kapiri Mposhi, which is a non-border site but is at a crossroads and is an internal trucking town.

A “take-all” sampling approach was used in two sites Kapiri Mposhi and Livingstone/Kazungula and cluster sampling was done in Chirundu which has heavy traffic. In “take all” sites the numbers enumerated during the mapping exercise were less than the desired sample sizes. All of the truck drivers aged 18 years and above who were passing through or found at the study sites or in clusters were invited to participate in the survey. Interviews were conducted after obtaining an oral consent using a standard BSS questionnaire. The survey was conducted in January 2006 over a period of 14 days by trained research assistants.

Trend analysis has been done on some indicators to track behavior variables using 2000, 2003 and 2006 data sets.

Results

In total, 1,006 LDTDs were interviewed at the three sites. The distribution was as follows: 701 (70.1%) from Chirundu, 203 (20.2%) from Livingstone and 101 (9.7%) from Kapiri Mposhi.

Demographics

Overall, the mean age of the respondents was 37.4 years and close to a half (49%) fell in the age bracket 30-39 years. The great majority (79%) had a secondary or higher level of education. Truck drivers interviewed in Chirundu had higher level of education than in the other two sites--81% in Chirundu, 76% in Livingstone and 74% in Kapiri Mposhi had secondary or higher level of education.

Most of the respondents (91%) were Christians and 85% were married and living with a spouse. About 45% of the truck drivers interviewed were Zambians, 41% Zimbabweans, and about 7% South Africans. Median stay at last time they were at a border was two days but nearly 49% stayed three or more days while over 70% reported three or more trips crossing the border in past three months. The majority of participants in Chirundu (56%) were Zimbabweans, in Livingstone/Kazungula and Kapiri Mposhi they were Zambians (66% and 75%)

There was, overall, a reduction in the proportion of truck drivers aged below 30 years (from 20.1% to 17.5%) and those aged 35 years and above (from 62.3% to 59.4%) between 2000 and 2006. During the same period, the proportion of truck drivers with secondary or higher level of education increased from 73.5 percent to 80.1 percent. On the other hand, the proportion of truck drivers who were currently married remained almost unchanged at about 88 percent.

Risk Behaviors

Alcohol and Drug use

Of all the respondents, 11% said they consumed alcohol daily in the last four weeks (approximately 12% from Chirundu, 10% from Livingstone and 7% from Kapiri Mposhi consumed alcohol daily) and about 18% reported ever having tried drugs (27.6% from Livingstone, 16% from Chirundu and about 4% from Kapiri Mposhi). The most common drug tried was dagga (marijuana) and the distribution among those who had ever used dagga was 24% for Livingstone, 15% for Chirundu and 4% for Kapiri Mposhi.

Overall, there was no appreciable change (from 11.1 percent to 11.5 percent) in the proportion of truck drivers who consumed alcohol on a daily basis between 2000 and 2006. However, the proportion of truck drivers who had ever used alcohol increased appreciably from 13.4 percent to 17.3 percent during the same period. The proportion of truck drivers who had ever used drugs (dagga) also increased between 2000 and 2006 among truck drivers.

Sexual Behavior

The great majority of the respondents were sexually active with 99% having ever had sexual intercourse with the mean age at first sex ranging from 17.3 years for those interviewed in Kapiri Mposhi to about 18.9 years in Chirundu. More than a third (34.9%) reported extra-marital sex with a regular sexual partner (girlfriend) and nearly a quarter (21%) of all respondents had at least one commercial sex partner and almost 6% with a non-regular/non-commercial sex worker twelve months prior to the survey.

In terms of trends, the data indicate a reduction in the proportion of truck drivers who had sex 12 months preceding the survey with one non-regular sex partner (from 78.3% to 31.8%) or with two or more non-regular sex partners from 20.9 percent to 4.4% percent between 2000 and 2006. On the other hand, the proportion of truck drivers who had sex with a commercial sex worker increased from 10.2 percent to 13.8 percent although there was a reduction (from 22 percent to 9 percent) in the proportion of truck drivers who had sex with two or more commercial sex workers.

Condom Knowledge and Use

Knowledge about condoms was high even among those who did not use a condom at last sexual intercourse with any partner--98% said they had heard about a male condom. In general, only a half (51%) of all the respondents reported having ever used a condom (50.1% in Chirundu, 46.8% in Kapiri Mposhi and 55.1% in Livingstone).

Among those who had ever used a condom, the proportion of truck drivers who used a condom at last sex with a commercial sex worker remained almost unchanged at about 93 percent while consistent condom use with a commercial sex worker increased from 84.4 percent to 86.8 percent between 2000 and 2006. During the same period, condom use at last sex with a non regular, non-commercial sex worker declined from about 75 percent to approximately 71 percent. On the other hand, consistent condom use with a non regular, non-commercial sex workers increased substantially by more than 10 percentage points from 50.7 percent to 61.1 percent.

Condom use in marriage remains low at approximately 6 percent.

STIs

About 98% have heard about STIs; but knowledge of actual symptoms varied with about half knowing that in women genital discharge (45%) or genital ulcers/sores (44%) are symptoms of an STI and three-quarters knowing that genital discharges (77%) and genital ulcers (73%) are symptoms of STIs in men. Approximately 6% of all respondents reported having suffered from either a genital discharge (3.4% in Chirundu, 5.1% in Kapiri Mposhi and 9.9% in Livingstone) and/or genital ulcer (2.5% in Chirundu, 2.0% in Kapiri Mposhi and 3.4% in Livingstone) in the past twelve months. Among those who had an STI, only about 16% stopped having sex, 13% told their partners about their infection and 5% consistently used a condom.

Between 2000 and 2006 the proportion of truck drivers with a history of genital discharge twelve months preceding the survey remained almost unchanged while those with ulcers substantially declined. During the same period, the proportion of respondents who correctly cited two or more STI symptoms in men increased from 76.1 percent to 81.7 percent.

Knowledge and Attitudes related to HIV/AIDS

Knowledge indicators measured the respondents' knowledge with regard to prevention of HIV/AIDS and misconceptions about the transmission of HIV infection and risk

Almost all the respondents (98%) had heard of HIV/AIDS. The means by which respondents thought infection could be avoided were abstinence (94%) and faithfulness (91%).¹ With regard to stigma and discrimination towards those living with HIV/AIDS, the results showed that approximately 3% of the respondents would prefer that HIV-positive students are not allowed to continue schooling and about 3% would prefer that HIV-positive teachers are not allowed to continue teaching. Similarly, 3% of the respondents said that they would not be willing to take care of an HIV-positive female relative in their household. About 18% of the truck drivers said they would not be willing to buy food from an HIV-positive shopkeeper. More than a quarter (27%) of all the respondents said they would want the status of an HIV-positive relative to remain a secret.

There was a general increase in the proportion of truck drivers with the knowledge that abstinence and faithfulness can prevent HIV. However, the proportion of respondents with the misconceptions that HIV can be transmitted through mosquito bites and through sharing a meal with an HIV-positive individual increased between 2000 and 2006.

HIV Voluntary Counseling and Testing

Majority of respondents (88.8%) reported having access to confidential HIV testing, though this varied significantly between study sites. Approximately 22% of the truck

¹ There was no question in this part to test knowledge on use of condom as prevention measure.

drivers claimed undergoing voluntary counseling and testing for HIV (23.3% in Chirundu, 23.5% in Kapiri Mposhi and 17.1% in Livingstone), 83.4 percent did so voluntarily. Among those tested (from any testing center), the majority (97%) found out the results of their HIV test.

The proportions of respondents who had ever been tested for HIV declined from 33.5% to 22%. However, the number that found out their HIV test result among those tested increased from 90% to 96% in Livingstone and from 91% to 98% in Chirundu.

Conclusions

The findings still present formidable challenges to the current and future efforts against the spread of HIV/AIDS. Sexual behavior indicators between 2000-2006 show an increase in proportion of the truck drivers who used drugs (mainly dagga) but no appreciable change in the daily use of alcohol during the same period. There is also reduction in LDTDs who had sex with two or more commercial sex workers but among those who had extra-marital relationship there is no significant change in condom use at last sex. On the other hand, the proportion of truck drivers who had sex with a commercial sex worker increased from 10.2 percent to 13.8 percent.

Trend data among LDTDs passing through Chirundu show a statistically significant increase in knowledge level that abstinence and faithfulness prevent HIV and reduction in misconception that mosquitoes transmit HIV and getting HIV through sharing a meal. But for truck drivers passing through Livingstone/Kazungula border, there was a decline in knowledge levels on the two prevention methods and an increase in misconception. The trend data on counseling and testing show a decline in numbers reporting being counseled and tested for HIV in 2006 compared to those in the previous BSS.

Recommendations

- 1 In the absence of a cure and while acknowledging the importance of abstinence and faithfulness to one equally faithful partner, condom use is the best effective means of prevention against HIV/AIDS and other STIs among those who engage in high risk behaviors. Yet this study has revealed that condom use in both marital and extra marital relationships among LDTDs, and indeed among the general Zambian population, is not yet popular and still below desirable levels. Since acceptability and use of condoms depends on various attitudes and beliefs shaped by culture and tradition, and most of these have already been documented, the challenge now is to come up with innovative ways of dismantling these beliefs and attitudes. In the meantime, research into an alternative to the condom as an HIV prevention tool should be encouraged and supported.
- 2 The finding that only about 37 percent and 2 percent of truck drivers mentioned peer educators and COH facilities, respectively, as sources of condoms suggests an urgent need to come up with innovative ways to reach out to this highly mobile and vulnerable group of men. Access to condoms by the men must continue to be improved and peer educators must play a key role as the most convenient suppliers of condoms.

- 3 Documented evidence exists to demonstrate the fact that drug abuse tends to lead to behavior that may increase the spread of HIV/AIDS. This is because drug abuse leads to defective perception and irrational or poor judgment. In view of the findings from this survey, program managers must begin to seriously analyze and understand substance use among the high-risk male populations at border posts and other targeted areas.
- 4 HIV testing and receiving the result is a critical entry point to the continuum of HIV prevention and care. Given the low and declining levels of VCT up-take reported by the respondents, it is necessary not only to scale up provision of such services but also to investigate the existing obstacles to VCT up-take among truck drivers. This should be combined with efforts to correct the dangerous belief among many truck drivers that ARVs can prevent HIV infection.
- 5 In view of the continued existence of some misconceptions about HIV transmission, there is need to develop better ways and strategies for correcting these misconceptions.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune-Deficiency Syndrome
ANC	Antenatal Care
ARV	Anti Retroviral
BSS	Behavioral Surveillance Survey
BBSS	Biologic and Behavioral Surveillance Survey
CBI	Cross Border Initiative
CBO	Community Based Organization
COH	Corridors of Hope
CSO	Central Statistics Office
CSW	Commercial Sex Worker
DHS	Demographic Health Survey
DHMT	District Health Management Team
DRC	Democratic Republic of Congo
FSW	Female Sex Worker
FHI	Family Health International
GRZ	Government of the Republic of Zambia
HIV	Human Immune-Deficiency Virus
IEC	Information, Education and Communication
IMPACT	Implementing AIDS Prevention and Care project
INESOR	Institute of Economic and Social Research
JICA	Japanese International Co-operation Agency
MOH	Ministry of Health
MTCT	Mother To Child Transmission
NACS	National AIDS Council and Secretariat
NGO	Non-Governmental Organization
SFH	Society for Family Health
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TB	Tuberculosis
TDRC	Tropical Diseases Research Centre
UNZA	University of Zambia
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
WVI	World Vision International
ZDHS	Zambia Demographic and Health Survey
ZSBS	Zambia Sexual Behavior Survey

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1 INTRODUCTION

1.1 HIV/AIDS in Zambia

Zambia is one of the countries in the southern Africa region hardest hit by the HIV epidemic. The Zambia population is estimated at 10 million people and one in almost six people (16%) is living with the HIV virus (ZDHS, 2001-2002). According to the figures in the HIV/AIDS Epidemic in Zambia book published by National AIDS Council, the provincial HIV prevalence rates range from 8.0 percent in Northern Province to 20.7 percent in Lusaka Province. In the provinces, there are variations in the rates among districts. The 10 districts with HIV prevalence higher than 20 percent are Livingstone (30.9%), Ndola (26.6%), Kitwe (26.6%), Chingola (26.6%), Chipata (26.3%), Kabwe (23.8%), Mazabuka (22.5%), Lusaka (22.4%), Kafue (22.4%) and 22.2 percent in Mongu (NAC/MOH, 2004). The prevalence of HIV is more than twice as high in urban areas as in rural areas (23 percent vs. 11 percent,). In Sub-Saharan Africa and in Zambia in particular, the predominant mode of transmission for sexually transmitted infections including HIV is through heterosexual intercourse.

The 2005 Zambia Antenatal Clinic Sentinel Surveillance report based on a 2004 survey study found an HIV prevalence of 19 percent among pregnant women attending antenatal clinics and the life time risk of dying of HIV of a child born in Zambia at 50 percent by age of 15 years. The numbers remain high in absence of proven prevention interventions and access to life saving antiretroviral therapy (NAC/MOH, 2005)

The HIV/AIDS prevalence rates in Zambia are highest along rail lines and the major highways. Zambia's major highways run alongside the two major rail lines, from Livingstone (border with Zimbabwe) to Chililabombwe (Kasumbalesa border with Congo DR), and from Kapiri Mposhi (inland) to Nakonde (border with Tanzania). Ndola is the center of truck depots and collection points for oil coming through Tanzania via the Zambia pipeline and coal from Bwana Mkumbwa mine. The major trucking borders are Chirundu and Livingstone (both border with Zimbabwe), Kazungula (border with Botswana), Chipata (border with Malawi), Nakonde and Kasumbalesa and a major internal trucking town of Kapiri Mposhi, at the junction of the two railway routes.

A number of factors in Sub-Saharan Africa and in particular in Zambia contribute to the vulnerability of the population to HIV infection. Among these factors are a decline in the standards of living, growing deprivation, poverty, unemployment and gender inequality. Under these circumstances, factors increasing the likelihood of a rapid spread of HIV include lack of knowledge about HIV and STIs and their modes of transmission, liberalization of sexual behavior, cultural factors, high rates of sexually transmitted infections, transactional sex, substance abuse and coercive sex. In addition to the age-specific focus of the disease, statistics indicate that women have consistently been found to have higher (in some cases as much as six times as high) prevalence rates of new HIV infections compared to men. The last Zambia Demographic and Health Survey (ZDHS, 2001-2002) revealed that 58 percent of the young people in the 15 – 24 year age group living with HIV were female. Overall, 42 percent of all infections in Zambia are among youth age 15 – 24. Similar trends are evident in most reports on HIV epidemic in southern Africa.

The HIV/AIDS epidemic in Zambia is one of the most serious medical and social problems in recent history and has an unpredictable course. The ramifications and remnants of devastation are evident in all social economic sectors of the country. With over 20 years in the epidemic, the consequences on the social and economic sectors will continue to be serious for a long time to come regardless of what happens to prevalence. But prevention of infection now will help mitigate the future impact of the disease.

The goal of the National AIDS Council's 2002-2005 National HIV/AIDS Strategic Plan was to reduce HIV/STD transmission among Zambians through promotion of responsible sexual behavior and to reduce the socio-economic impact of HIV/AIDS (NAC SP, 2002-2005).

Data from the recent Zambia Sexual Behavior Survey (ZSBS, 2005) on the UNAIDS VCT and stigma indicators show that within the entire population only 8.5 percent (7.2% males, 9.6% females) were counseled and tested for HIV and only 31.1 percent (33.9% males, 28.5% females) with accepting attitudes of those with HIV. Among urban men, 50 percent used a condom at last sexual intercourse with a non-regular partner; while 44.9 percent among women reported using a condom at last sexual intercourse with non-regular partner. According to 2005 ZSBS, among the 24.5 percent (28.8% in urban settings, 22.5% in rural) of the respondents who reported having sex in the last year with high risk populations, only 37.5 percent (50.0% in urban settings, 29.9% in rural) used a condom at last high risk sex.

1.2 Program Description

The link between mobility and HIV vulnerability has been recognized in facilitating the spread of HIV. Highways and borders are environments of elevated HIV vulnerability. Long distance truck drivers, because of the nature of their work, spend much of their time from their homes and families. They engage in sexual relationships which put them at risk of HIV and other sexually transmitted infections.

Resulting from recognition that there is a high prevalence of HIV/AIDS along major highways and a concentration of high-risk groups in border areas, the United States Agency for International Development (USAID) and the Japanese International Cooperation Agency (JICA) funded, through Family Health International (FHI), the Corridors of Hope (COH) project (initially called the Cross-Border Initiative project-CBI). World Vision Zambia (WVZ) and Society for Family Health (SFH) began implementing activities in border sites and the major trucking towns in 1999. In 2004, WVZ and SFH were joined by Zambia Health Education and Communications Trust (ZHECT).

At end of 2005, the COH project was working in six of the nine provinces of Zambia covering ten district sites: Chirundu, Livingstone and Kazungula in the Southern Province; Kasumbalesa and Ndola on the Copperbelt; Kapiri Mposhi in the Central Province; Nakonde in the Northern; Chipata and Katete in the Eastern Province and Lusaka in Lusaka Province. Three of these sites (Chipata, Lusaka, and Ndola) were established in April 2004 with funds from the President's Emergency Plan for AIDS Relief (PEPFAR).

The main targets for the project are FSWs and their clients, specifically long distance truck drivers passing through these sites. The project aims to change behavior through peer education and promotion of condoms and voluntary counseling and testing (VCT) services, as well as providing STI care.

To assess the outcomes of the COH project in Zambia, and to monitor behavioral trends over time, Behavioral Surveillance Surveys (BBSS) are carried out. The BSS measure reported high-risk behaviors that can help explain biological trends including HIV prevalence over time. Prevalence of HIV and other STIs risk behaviors capture the impact of the prevention interventions and complement the HIV surveillance data that are collected by the government of Zambia.

In addition, BSS is justified in its own right by the need to obtain data on behavioral trends among target populations that are not often targeted by population-based surveys such as the DHS and Sexual Behavior Surveys. BSS as a repeated cross-sectional survey of behavior in a representative population is an essential component of second generation HIV surveillance systems. The importance of BSS carried out by COH is justified by the fact that it focuses on the most vulnerable and high-risk segments of the population, whose behaviors can have the most significant effect on the course of the epidemic.

In January 2006, FHI Zambia working with three consultants carried out the third behavioral surveillance survey among long distance truck drivers in Livingstone, Chirundu and Kapiri Mposhi. Two of these sites, Livingstone and Chirundu have participated in all the three previous studies while Kapiri Mposhi participated in the last BSS carried out in 2003.

2 OBJECTIVES

2.1 Primary objective:

To monitor the outcomes of the existing prevention interventions, through a cross-sectional assessment of risk behavior variables among men at high risk of STIs and HIV.

2.2 Secondary objectives:

- a) To add and strengthen the monitoring system that will track behavioral trend data for high-risk and vulnerable target groups.
- b) To provide information on behavioral trends of key target groups in some of the same catchment areas where voluntary counseling and testing (VCT) for HIV is being offered.
- c) To provide information to help guide HIV prevention program planning.
- d) To provide evidence of the relative success of the combination of HIV prevention efforts taking place in selected sites
- e) To obtain data in a standardized format, which will enable comparison with other behavioral surveillance studies carried out in other countries

3 METHODOLOGY

3.1 Sample Size

The sample size was calculated to detect a 10 percent increase in condom use with non-regular partners. The initial P1 value was estimated at 50 percent. The design effect was estimated at 1.2 because of the cluster design used to sample the target groups and based on the data from the 2000 survey. The level of precision was set at 0.05 and the power at 0.80. Using this formula, and taking into account the fact that not all men will have had commercial partners in the last twelve months, and the chance that some of the individual men in the target groups will not be interviewed, the required sample size was 915 for each category of men. However, prior to commencement of data collection, a mapping exercise was carried out to determine the existing population sizes, peak times, and sites where truck drivers congregate (e.g. loading sites). From this exercise, the findings were that on average 150-180 long distance truck drivers crossed Chirundu border a day, 40-60 crossed Kazungula border via Livingstone and almost the same number passed through Kapiri Mposhi each day. Because of these limited numbers of respondents in Kapiri Mposhi and Livingstone/Kazungula, it was not possible to obtain the required samples in these two sites and consequently total sampling procedure was used where all eligible and identified respondents were included in the survey and cluster sampling for Chirundu which has a high traffic load.

3.2 Sampling and Survey Procedure

This was a cross-sectional survey of long distance truck drivers. The survey was carried out in Livingstone, Kapiri Mposhi and Chirundu. The primary sampling units were long distance truck drivers. These were mainly found at truck depots where they loaded goods for delivery to various destinations. All the men aged 18 years and above found in the primary sampling units during the survey period were asked to participate. The survey was explained to all the potential participants and informed consent obtained before every interview.

3.3 Data Collection Instruments

The survey used a semi-structured questionnaire as a data collection instrument to record behavioral-related information from long distance truck drivers. The semi-structured questionnaire consisted of both open- and close-ended questions. The open-ended questions required that the interviewer record the responses verbatim whilst the closed-ended questions were mostly pre-coded and required the interviewer to circle the appropriate response. The instrument contained questions addressing: socio-demographic factors; country of origin; marriage, family and work; sexual history; male and female condoms; STIs; knowledge about HIV/AIDS; and stigma and discrimination against people living with HIV/AIDS. The questionnaire was similar to the one used in Round 1(2000) and Round 2 (2003) of the BSS. The questionnaire was translated into the Chibemba and Nyanja languages for use whenever the interviewer encountered anyone who preferred to be interviewed in the local language.

3.4 Data Collection Process

Data collection was done over a period of 14 days in January 2006. Before the commencement of data collection, a five-day training workshop was held for the research assistants, where interview principles and techniques were taught. Issues covered during the training included: orientation on the COH project, survey purpose, consent procedures, confidentiality, sensitization to issues pertaining to sex work, roles and responsibilities of the team members. Practical exercises were done, where interviewers performed role-plays. The last two days of the workshop were used to pre-test the instrument in Lusaka.

Ten trained male research assistants conducted the interviews. COH project outreach workers and peer educators facilitated the recruitment of the truck drivers into the study. They helped to introduce the interviewers to the respondents. The interviewers then administered the questionnaire after obtaining consent. The interviews were conducted privately on a one-to-one basis. Each interview lasted for an average of 30 minutes. The times of the interview's start and finish were recorded onto the questionnaire. Editors went through all the completed questionnaires to ensure accuracy in recorded responses and ultimately good quality data. The editors were also responsible for coordinating the interviewers' daily activities, ensuring that the survey requirements were strictly followed, and supporting the interviewers whenever there were concerns or questions.

3.5 Informed Consent and Confidentiality

This survey addressed issues of sex and sexuality, partners outside of marriage, and STIs including HIV/AIDS. Therefore, it dealt with sensitive subject matter that needed privacy and confidentiality. The respondents were assured of confidentiality. The interviewers were obligated to obtain informed consent and to ensure that all the information gathered remained confidential.

3.6 Data Analysis

The completed questionnaires were edited in the field and transported to Lusaka for data processing. The questionnaires were then coded and entered into the database using Epi-info version 6. The files were converted into the statistical package for the social sciences (SPSS) for analysis, which consisted of descriptive statistics that computed frequencies, means, and median for comparison among and between sites. Cross tabulations and p-values were calculated for some core variables.

4 Results

A total of 1,103 long distance truck drivers (LDTDs) were approached for an interview out of which 97 (8.8%) did not participate for various reasons. Therefore a total 1,006 LDTDs completed interview. See **Table 1**.

4.1 Reasons for Refusal

Reasons for refusal by the 97 varied. In Livingstone, researchers failed to complete the questionnaires with one as the truck driver rushed to cross the border. Truck drivers caring relief maize, explosives, fuel and lubricants were on fast truck clearance. In Chirundu, 63 truck drivers did not participate. Three questionnaires were incomplete, because of time, twelve refused because they had been interviewed a number of times before without seeing benefits, ten refused because they were busy with a sexual partner in the truck, eight said they were tired and wanted to rest, nine said it was against company policy to be interviewed while 21 demanded incentives such as T-shirts before they could be interviewed. In Kapiri Mposhi, 33 were excluded--three because of an incomplete interview due to time, 30 because of language barrier--researchers could not communicate in Swahili—and three for other reasons.

Table 1: Break down of LDTDs Interviewed and Excluded by Site

Site	Invited for Interview	Refused	Interviewed
Livingstone	204	1	203
Chirundu	768	63	705
Kapiri Mposhi	134	36	98
Total	1,106	97 (8.8%)	1,006

4.2 Socio-demographic Characteristics of Survey Population

This section and **Table 2** present information on socio-demographic characteristics of the LDTDs' age and level of education.

4.2.1 Age

The mean age of the respondents was 37.4 years. The largest proportion of the truckers (26.3%) fell in the age group 35-39 years with over a half (59.7%) in age range of 35 and over. No statistically significant differences in the age distribution were observed among sites for respondents aged 29 and below and those aged above ($p=0.171$).

4.2.2 Educational Background

The average number of years spent in school among those who reported having been to school was 10.1 years. The proportion with a secondary or higher level of education was about 80 percent while 18.8 percent and 1.7 percent had primary or no education, respectively. Truck drivers interviewed in Chirundu had the highest, 81.3 percent, level of education followed by Livingstone (76%) and Kapiri Mposhi (74%) with secondary or higher level of education. There was no statistically significant difference in education level among truck drivers with none and primary education only and those with secondary and above education according to sites ($p=0.410$).

4.2.3 Religion

The majority (91.1%) was Christians, followed by Muslim (3.8%), three were Hindus and another three belonged to other religious groups. The difference between Christianity and other religions was statistically significant ($p=0.004$).

Table 2: Age and Education Level of LDTDs by Site

Characteristic	Chirundu	Kapiri Mposhi	Livingstone	Total	P value
Age (years)					
Mean	37.4	37.8	37.1	37.4	0.171
	n (%)	n (%)	n (%)	N (%)	
< 25	15 (2.1)	4 (4.1)	4 (2.0)	23 (2.3)	
25 – 29	102 (14.5)	14 (14.3)	38 (18.2)	154 (15.3)	
30 – 34	177 (25.1)	18 (18.4)	33 (16.3)	228 (22.7)	
35 – 39	177 (25.1)	28 (28.6)	59 (29.1)	264 (26.3)	
40 – 44	71 (10.1)	11 (11.2)	29 (14.3)	111 (11.0)	
45 – 49	87 (12.3)	13 (13.3)	26 (12.8)	126 (12.5)	
50+	76 (10.8)	10 (10.2)	14 (6.9)	100 (9.9)	
Total	705	98	203	1,006	
Level of education					
Mean total years of education	10.3	9.6	9.9	10.1	0.410
None	6 (0.9)	5 (5.2)	6 (3.0)	17 (1.7)	
Primary	121 (17.8)	20 (20.8)	42 (21.0)	183 (18.8)	
Secondary	495 (72.9)	64 (66.7)	133 (66.5)	692 (71.0)	
Higher	57 (8.4)	7 (7.3)	19 (9.5)	83 (8.5)	
Total	679	96	200	975	
Religion					
No religion	40 (5.7)	0 (0)	5 (2.5)	45 (4.5)	
Christian	656 (93.0)	86 (87.8)	174 (86.1)	916 (91.1)	0.004
Muslim	9 (1.3)	12 (12.2)	17 (8.4)	38 (3.8)	
Buddhist	0 (0)	0 (0)	0 (0)	0(0)	
Hindu	0 (0)	0 (0)	3 (1.5)	3 (0.3)	
Others	0 (0)	0 (0)	3 (1.5)	3 (0.3)	
Total	705	98	202	1,005	

4.2.4 Marital Status

Table 3 presents marital status and age at first marriage. The majority (91.2%) of the respondents reported ever being married. However, there were statistically significant differences ($p=0.043$) among the study sites with respect to the proportion of respondents ever married. Truck drivers interviewed from Kapiri Mposhi (92.9%) and Chirundu (92.2%) respectively had the largest proportion of respondents that had ever been married, while 86.7 percent of the Livingstone respondents reported ever being married. A statistically significant difference between sites in marital status was reported ($p=0.013$); 88.6 percent of truck drivers were either currently married living with spouse, or with other partner or married but living alone. The mean age at first marriage was 24.7 years ranging from 23.3 years in Kapiri Mposhi to 25.7 years in Livingstone.

Table 3: Socio-demographic Characteristics of the LDTDs by Site (continued)

Characteristic	Chirundu	Kapiri Mposhi	Livingstone	Total	P value
	n (%)	n (%)	n (%)	N (%)	
Ever married					
Yes	650 (92.2)	91 (92.9)	176 (86.7)	917 (91.2)	0.043
Total	705	98	203	1006	

Characteristic	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)	P value
Marital status					
Married living with spouse	604 (86.8)	77 (79.4)	162 (81.0)	843 (84.9)	
Married living with other	8 (1.1)	13 (13.4)	3 (1.5)	24 (2.4)	
Married living alone	12 (1.7)	0 (0)	1 (0.5)	13 (1.3)	0.013
Not married living with someone	10 (1.4)	2 (2.1)	2 (1.0)	14 (1.4)	
Not married living alone	62 (8.9)	5 (5.2)	32 (16.0)	99 (10.0)	
Total	696	97	200	993	
Age at marriage					
Mean	24.7	23.3	25.7	24.7	
Total	650	91	171	912	

4.2.5 Drivers' Country of Origin and Mobility

As can be seen from **Table 4**, the truck drivers' country of origin differed from one site to another. Slightly over half (55.9%) of the truck drivers interviewed in Chirundu reported Zimbabwe as their country of origin, 75.5 percent and 66.5 percent interviewed in Kapiri Mposhi and in Livingstone respectively reported Zambia as their country of origin. The number of truck drivers who mentioned Zambia as country of origin differed from site to site and the difference was statistically significant ($p < 0.001$).

Asked about how many days they spent at the sites where they were interviewed in the past three months preceding the survey, the median number was one day. Eighty-nine percent reported a stay of up to two days but nearly half (49.3%) in Chirundu, 14.4 percent in Kapiri Mposhi and 13.5 percent in Livingstone reported a stay of two or more days. Asked about how many times they had crossed the border, about 24.6 percent indicated that they had crossed three or more times while 18.9 percent had crossed the border 10 or more times in the three months prior to survey.

Table 4: Socio-demographic Characteristics of LDTDs by Site (continued)

Characteristic	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)
Country of origin				
South Africa	55 (7.8)	1 (1.0)	13 (6.4)	69 (6.9)
Somalia	0 (0)	2 (2.0)	9 (4.4)	11 (1.1)
Malawi	9 (1.3)	0 (0)	1 (0.5)	10 (1.0)
Zimbabwe	394 (55.9)	0 (0)	22 (10.8)	416 (41.4)
Tanzania	0 (0)	5 (5.1)	8 (3.9)	13 (1.3)
Mozambique	4 (0.6)	0 (0)	2 (1.0)	6 (0.6)
Congo DR	0 (0)	16 (16.3)	0 (0)	16 (1.6)
Botswana	0 (0)	0 (0)	13 (6.4)	13 (1.3)
Zambia	242 (34.3)	74 (75.5)	135 (66.5)	451 (44.8)
Others	1 (0.1)	0 (0)	0 (0)	1 (0.1)
Total	705	98	203	1,006

Characteristic	Chirundu	Kapiri Mposhi	Livingstone	Total
Period of stay at the border (days)				
Median	1	1	1	1
	n (%)	n (%)	n (%)	N (%)
< 1	49 (7.2)	41 (42.3)	70 (35.0)	160 (16.3)
1	297 (43.5)	42 (43.3)	103 (51.5)	442 (45.1)
2	240 (35.1)	13 (13.4)	21 (10.5)	274 (28.0)
3	55 (8.1)	1 (1.0)	1 (0.5)	57 (5.8)
4	42 (6.1)	0 (0)	5 (2.5)	47 (4.8)
Total	683	97	200	980
Number of trips crossing the boarder in the past 3 months				
Median	4	6	5	4
	n (%)	n (%)	n (%)	N (%)
0	6 (0.9)	5 (5.3)	5 (2.5)	16 (1.6)
1 – 2	181 (25.8)	20 (21.1)	45 (22.3)	246 (24.6)
3 – 5	217 (31.0)	20 (21.1)	53 (26.2)	290 (29.1)
6 – 9	186 (26.5)	16 (16.8)	55 (27.2)	257 (25.8)
10+	111 (15.8)	34 (35.8)	44 (21.8)	189 (18.9)
Total	701	95	202	998

In **Table 5**, the length of stay the last time at the border varied significantly across sites ($p=0.001$). Forty-nine percent interviewed in Chirundu, 13 percent in Kapiri Mposhi and 1.9 percent in Livingstone stated a stay of three days and more. The usual stated length of stay at the border varied from site to site. While only 6.2 percent and 2.5 percent of those passing through Kapiri Mposhi and Livingstone respectively spent between three or more days, the corresponding proportion for those using the Chirundu border post was slightly more (44.1%).

Table 5: Socio-demographic Characteristics of LDTDs by Site (continued)

Characteristic	Chirundu	Kapiri Mposhi	Livingstone	Total
Length of stay last time was at the border site (days)				
Median	2	1	1	2
	n (%)	n (%)	n (%)	N (%)
<1	26 (3.8)	42 (43.3)	98 (48.5)	166 (16.8)
1	139 (20.1)	27 (27.8)	95 (47.0)	261 (26.4)
2	187 (27.1)	15 (15.5)	5 (2.5)	207 (20.9)
3	164 (23.7)	4 (4.1)	2 (1.0)	170 (17.2)
4	103 (14.9)	7 (7.2)	0 (0)	110 (11.1)
5+	72 (10.4)	2 (2.1)	2 (1.0)	76 (7.7)
Total	691	97	202	990

Characteristic	Chirundu	Kapiri Mposhi	Livingstone	Total
Length of time usually stayed at boarder/site				
Median	2	1	0	2
	n (%)	n (%)	n (%)	N (%)
<1	14 (2.0)	43 (44.3)	103 (51.2)	160 (16.2)
1	92 (13.3)	29 (29.9)	84 (41.8)	205 (20.7)
2	280 (40.5)	19 (19.6)	8 (4.0)	307 (31.0)
3	177 (25.6)	6 (6.2)	5 (2.5)	188 (19.0)
4+	128 (18.5)	0 (0)	1 (0.5)	129 (13.0)
Total	691	97	201	989

4.3 General Risk Behaviors of Study Population

The following section presents different risk behaviors and sexual behaviors with different sexual partners of LDTDs interviewed. See **Tables 6-9**.

4.3.1 Alcohol Consumption in the last Four Weeks and Drug Use

Alcohol and drug use have a high correlation with increased risk of HIV infection and other STIs. Because of this correlation, the respondents were asked the frequency of alcohol consumption in the last four weeks. The overall response showed that 11.1 percent of the respondents had alcoholic drinks every day in the last four weeks, 24 percent had alcoholic drinks at least once a week and 65 percent had alcoholic drinks either less than once a week (8.7%) or never (56.3%). However, there were differences among the respondent categories which were not statistically significant ($p=0.615$). Respondents from Kapiri Mposhi were the least likely to report drinking alcohol daily (7.2%) while those from Chirundu (11.9%) were more likely to drink alcohol daily.

The respondents were given a list of drugs to which they responded either affirmatively or negatively to having ever used. The drugs included dagga (marijuana), heroin, cocaine, and mandrax. Approximately 16 percent reported having smoked dagga, while no one reported ever having used heroin and less than 1 percent reported having ever used cocaine or mandrax. As seen in **Table 6**, there was a significant difference between respondents from the three study sites with regards to drug use. More respondents from Livingstone (24.1%) than from Kapiri Mposhi (4.1%) and Chirundu (15.3%) reported ever having used dagga. Respondents from Livingstone were also more likely to report using drugs on a daily basis than those from other sites.

Table 6: Alcohol and drug use by LDTDs by Site

Characteristic	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)
Alcohol use				
Everyday	84 (11.9)	7 (7.2)	20 (9.9)	111 (11.1)
At least once a week	168 (23.9)	29 (29.9)	44 (21.7)	24 (24.0)
Less than once a week	61 (8.7)	8 (8.2)	18 (8.9)	87 (8.7)
Never	391 (55.5)	53 (54.6)	121 (59.6)	565 (56.3)
Total	704	97	203	1,004
Drug ever used				
Dagga	108 (15.3)	4 (4.1)	49 (24.1)	161 (16.0)
Total	706	98	203	1007
Heroin	0 (0)	0 (0)	0 (0)	0 (0)
Cocaine	5 (0.7)	0 (0)	3 (1.5)	8 (0.8)
Total	704	98	201	1003
Mandrax	5 (0.5)	0 (0)	4 (2.0)	9 (0.9)
Total	705	98	201	1,004
Drug use in last four weeks (dagga)				
Everyday	17(17.0)	1	11(25.0)	29 (19.9)
At least once a week	21(21.0)	1	33 (75.0)	55 (37.7)
Less than once a week	0 (0)	0	0 (0)	0 (0)
Never	62 (62.0)	0	0 (0)	62 (42.5)
Total	100	2	44	146
Cocaine				
Everyday	0	0	0	0
At least once a week	1	0	1	2
Less than once a week	0	0	0	0
Never	3	0	0	3
Total	4	0	1	5
Mandrax				
Everyday	0	0	0	0
At least once a week	0	0	3	3
Less than once a week	1	0	0	1
Never	4	0	0	4
Total	5	0	3	8

4.3.2 Sexual Behavior and Partners

The survey findings showed that the vast majority (98.9%) of the respondents ever had had sexual intercourse. **Table 7** presents the age at first sex for all the LDTD respondents. Sixty LDTDs said they did not know their ages while 10 (1.1%) were excluded (6.5%) because their ages were not properly recorded—the ages recorded were below 10 years. The mean age at first sex of truck drivers was 18.5 percent; it was 17.3 percent among LDTDs interviewed in Kapiri Mposhi, 17.6 percent among truck drivers interviewed in Livingstone and 18.9 years among LDTDs from Chirundu. Those who reported sexual intercourse in past twelve months with any partner were further asked about the number of sexual partners in the past twelve months. In Chirundu 24.3 percent, in Livingstone 16.8 percent and in Kapiri Mposhi 12.3 percent respectively reported three or more sexual partners.

Table 7: Sexual Behavior reported by LDTDs by Site

Characteristic	Chirundu	Kapiri Mposhi	Livingstone	Total
	n (%)	n (%)	n (%)	N (%)
Sexually Active				
Ever	696 (98.7)	98 (100)	201 (99.0)	995 (98.9)
Total	705	98	203	1,006
Age at first sexual intercourse				
Mean	18.9	17.3	17.6	18.5
Did not know	41	10	9	60
**Total	652	87	186	925
Number of sexual partners in the last 12 months				
Mean	2.3	2.6	2.0	2.3
Median	2	1	2	2
Range	1 – 61	0 – 81	1 – 19	0 – 81
	n (%)	n (%)	n (%)	N (%)
1	310 (48.5)	56 (58.9)	81 (49.1)	447 (49.6)
2	176 (27.4)	26 (27.4)	56 (33.9)	258 (28.6)
3 – 4	101 (15.7)	6 (6.3)	20 (12.1)	127 (14.1)
5+	55 (8.6)	6 (6.3)	8 (4.8)	69 (7.7)
***Total	642	95	165	901

** 10 were excluded because ages were not correctly recorded, they recorded below 10 years.

*** includes all sexual partners (wives, live-in partners, sex workers, regular sex partner etc).

4.3.3 Wives, Live-In Sexual Partners

In **Table 8** out of the 1,006 LDTDs, 848 (84.3%) reported they had had sex with wives in the last twelve months (4% mentioned two or more wives) and 83 (8.4%) reported having a live-in sexual partner twelve months prior to survey. About 90.2 percent, 88.4 percent and 94.5 percent of respondents from Chirundu, Kapiri Mposhi and Livingstone, respectively, reported having no live-in sexual partner over the last twelve months.

4.3.4 Girlfriend (Regular) Sexual Partners

Three hundred eighteen or 35 percent of all the respondents reported having a regular sexual partner² (girlfriend) in the last twelve months prior to survey. The highest proportion (37.1%) having one or more regular partners was observed in Livingstone followed by Chirundu (35.7%) while Kapiri Mposhi had slightly over a quarter (25.3%). The difference between sites was not statistically significant (p=0.109). See **Table 8**.

4.3.5 Commercial Sexual Partners

One hundred ninety four (19.3%) of the participants had sex with a commercial sex worker or someone with whom they had exchanged money or gifts for sex twelve months prior to survey. Over a quarter (26.4%) said they had had sexual intercourse with two or more sex workers. Respondents from Kapiri Mposhi reported the least contact with commercial sex workers (8.2%), followed by respondents from Livingstone (11.8%). Seventy-seven (8.4%) percent of all the respondents said they had had sexual contact with two or more commercial sex partners in the past twelve

² A regular sexual partner was defined as a girlfriend not living with respondent in last 12 months.

months. The differences between sites were statistically significant ($p=0.001$), with 9.1 percent truck drivers interviewed in Chirundu, 5.1 percent interviewed in Kapiri Mposhi and 3.9 percent interviewed in Livingstone mentioning having sexual intercourse with two or more commercial partners in the past year. Refer to **Table 8**.

4.3.6 Non-Regular Partners

About 5 percent of the truck drivers reported sex with a non-regular³ partner in past twelve months. The difference between sites was not statistically significant ($p=0.229$). More of the truck drivers interviewed in Chirundu (5.5%) than Livingstone (5.9%) or n Kapiri Mposhi (2.0%) said they had had sex with a non-regular sex partner at least once in the past twelve months. See **Table 8**.

Table 8: Sexual behavior reported by LDTDs by Site (continued)

Characteristic	Chirundu	Kapiri Mposhi	Livingstone	Total
Number of sexual partners in the last 12 months (wives)				
Mean	1.0	1.1	1.0	1.0
Median	1	1	1	1
Range	1 – 3	1 – 2	1 – 2	1 -3
	n (%)	n (%)	n (%)	N (%)
1	583 (95.7)	82 (93.2)	145 (96.0)	810 (95.5)
2+	26 (4.3)	6(6.8)	6 (4.0)	38 (4.5)
Total	609	88	151	848
Number of live-in sexual partners in the last 12 months				
Mean	1.1	1.1	1.1	1.1
Median	1.0	1.0	1.0	1.0
Range	1 – 6	1 – 1	1 – 1	1 - 6
	n (%)	n (%)	n (%)	N (%)
1	60 (95.2)	11 (100)	9 (100)	80 (96.4)
2+	3 (4.8)	0 (0)	0 (0)	3 (3.6)
Total	63	11	9	83
Number of girlfriends (regular partners) not living together past 12 months				
Mean	1.2	1.4	1.4	1.2
Median	1.0	1.0	1.0	1.0
Range	1 – 6	1 – 4	1 – 8	1– 8
	n (%)	n (%)	n (%)	N (%)
1	206 (88.8)	19 (79.2)	53 (85.5)	278 (87.4)
2+	26 (11.2)	5 (20.8)	9 (14.5)	40 (12.6)
Total	232	24	62	318

³ For the purpose of this survey, a non-regular partner was defined as a partner with whom the respondent has had sex in the past twelve months. Partners who are spouses, long-standing girlfriends (regular), living with the respondent, or with whom they have exchanged sex for money (commercial sex workers) are not defined as non-regular partners.

Characteristic	Chirundu	Kapiri Mposhi	Livingstone	Total
Number of commercial sex worker in past 12 months				
Mean	3.0	8.9	2.7	3.2
Median	1.0	3.0	1.0	1.0
Range	1 -- 60	1 – 50	1 – 10	1– 60
	n (%)	n (%)	n (%)	N (%)
1	98 (60.5)	3 (37.5)	16 (66.7)	117 (60.3)
2	10 (6.2)	0 (0)	1 (4.2)	11 (5.7)
3 – 4	19 (11.7)	3 (37.5)	3 (12.5)	25 (12.9)
5+	35 (21.6)	2 (25.0)	4 (16.7)	41 (21.1)
Total	162	8	24	194
Number of non-regular non-commercial (casual) in past 12 months				
Mean	1.7	16.0	2.2	2.3
Median	1.0	16.0	1.0	1.0
Range	1 - 10	2 – 30	1 – 8	1 – 30
	n (%)	n (%)	n (%)	N (%)
1	31 (79.5)	0 (0)	8 (66.7)	39 (73.6)
2+	8 (20.5)	2 (2.1)	4 (33.3)	14 (26.4)
Total	39	2	12	53

4.3.7 Frequency of Sexual Intercourse

The truck drivers who reported having sexual intercourse with their wives, live-in partners, regular, commercial and non-regular sexual partners were asked about the frequency of sexual intercourse with their partners in the last 30 days (**Table 9**). Half of the truck drivers passing through Livingstone reported more sex with non-regular (non commercial) sex partners (median 4) while those interviewed in Kapiri Mposhi reported less contact with sex workers (median 1).

Table 9: Sexual Behavior of LDTDs with most recent Partner/Type of Partner by Site

Characteristic	Chirundu	Kapiri Mposhi	Livingstone	Total
Frequency of sexual intercourse over the last 30 days with wife or live-in				
Mean	7.0	5.1	6.1	6.7
Median	6	4	6	5
Range	0 - 30	0 – 30	0 - 30	0 – 30
Total	589	85	155	829
Girlfriend (regular, not living together)				
Mean	3.6	2.6	3.4	3.5
Median	2	2	2	2
Range	0 - 24	0 – 13	0 - 12	0 – 24
Total	238	21	64	323

Characteristic	Chirundu	Kapiri Mposhi	Livingstone	Total
Commercial Sex workers				
Mean	3.7	2.6	2.9	3.5
Median	2	1	2	2
Range	0 - 15	1 - 12	1 - 10	0 - 15
Total	151	8	25	184
Non-regular (no commercial partners)				
Mean	1.7	1.5	5.2	2.5
Median	2	1.5	4	2
Range	0 - 7	1 - 2	1 - 16	0 - 16
Total	41	2	13	56

4.4 Knowledge, Availability and Accessibility of Condoms

Table 10 presents the findings of knowledge, availability and accessibility of condoms. Among those who did not use a condom the last time he had sex with any partner, 98 percent had previously heard about male condoms. The high knowledge levels are observed in all study sites with a range of 92 percent to 99 percent.

Almost half (49.6%) of the respondents said they had ever bought a condom. The difference between sites was statistically significant ($p=0.030$). In Chirundu, 52.6 percent, in Livingstone 47.4 percent, and in Kapiri Mposhi 34.9 percent reported that they had bought a condom in the past. At the time of the interview, only 18.2 percent (20.6% in Chirundu, 11.3% in Kapiri Mposhi and 13.4% in Livingstone) had a condom at hand but the difference between sites was not statistically difference ($p=0.085$).

While many had heard of condoms, only half (50.6%) reported ever having used a condom. The proportion of ever having used a condom was lowest among the respondents from Kapiri Mposhi (46.8%) and highest among those from Livingstone (55.1%).

Approximately 90 percent of the respondents knew of a place to obtain condoms. Truck drivers interviewed in Livingstone had the lowest proportion (76.5%) of respondents knowing where to obtain a condom. The most commonly cited places for obtaining condoms were pharmacies (86%), bars/guest houses/hotels (65%), markets (52%) and clinics (50.4%)--in that order in each of the sites. Peer educators as sources of condoms were mentioned by 36.8 percent only while 2.3 percent mentioned COH/Blue Houses as condom sources.

When asked how long it typically took them to obtain a condom, 85.5 percent of the respondents reported that it took them less than 15 minutes to obtain a condom. Whereas approximately 88 percent of respondents from both Livingstone and Chirundu said it took less than 15 minutes, the corresponding proportion for Kapiri Mposhi was only about 66 percent.

Table 10: Knowledge and Availability of Male Condoms

Characteristics	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)
Ever heard of male condom				
Yes	377 (99.0)	63 (100)	91 (92.9)	531 (98.0)
Total	381	63	98	542
Ever bought a condom				
Yes	201 (52.6)	22 (34.9)	46 (47.4)	269 (49.6)
Total	382	63	97	542
Ever used a condom				
Yes	190 (50.1)	29 (46.8)	54 (55.1)	273 (50.6)
Total	379	62	98	539
Knows where to obtain condoms				
Yes	606 (92.5)	92 (96.8)	137 (76.5)	835 (89.9)
Total	655	95	179	929
Had condom at hand at the time of interview				
Yes	78 (20.6)	7 (11.3)	13 (13.4)	98 (18.2)
Total	379	62	97	538
Places or persons where condoms can be obtained				
Shop	1 (0.2)	0 (0)	0 (0)	1 (0.1)
Pharmacy	552 (91.1)	76 (82.6)	87 (63.5)	715 (85.6)
Market	334 (55.1)	42 (45.7)	55 (40.1)	431 (51.6)
Clinic	356 (58.7)	20 (21.7)	45 (32.8)	421 (50.4)
Hospital	302 (49.8)	18 (19.6)	23 (16.8)	343 (41.1)
Family Planning Clinic	204 (33.7)	12 (13.0)	12 (8.8)	228 (27.3)
Bar/Guest House/Hotel	430 (71.0)	53 (57.6)	62 (45.3)	545 (65.3)
Peer Educator	284 (46.9)	7 (7.6)	16 (11.7)	307 (36.8)
Friend	132 (21.8)	9 (9.8)	7 (5.1)	148 (17.7)
Workplaces/Garages	30 (5.0)	1 (1.1)	0 (0)	31 (3.7)
Tuck Shops	13 (2.1)	0 (0)	0 (0)	13 (1.6)
Street Vendor	2 (0.3)	2 (2.2)	1 (0.7)	5 (0.6)
Boarder Post	11 (1.8)	1 (1.1)	4 (2.9)	16 (1.9)
WVI, CBI, Blue House	13 (2.1)	4 (4.3)	2 (1.5)	19 (2.3)
Other	11 (1.8)	0 (0)	1 (0.7)	12 (1.4)
Delays in obtaining condoms (minutes)				
< 15	523 (87.9)	59 (65.6)	120 (88.2)	702 (85.5)
15 – 30	57 (9.6)	29 (32.2)	14 (10.3)	100 (12.2)
31 – 60	8 (1.3)	1 (1.1)	1 (0.7)	10 (1.2)
>60	7 (1.2)	1 (1.1)	1 (0.7)	9 (1.1)
Total	595	90	136	821

4.4.1 Condom Use with Wives

Respondents were asked whether they ever had sexual intercourse. Those who said yes were further asked if they had had sexual intercourse in last twelve months with their wife. Those who agreed were further asked whether the last time they had sex with their wife they used a condom. Reported condom use at last sex with a wife (**Table 11**) was low (5.6%) for all married respondents surveyed. Chirundu had the

lowest (4.2%) while Livingstone men had the highest proportion (9.7%) of men reporting condom use at last sex with their wife.

Over a half in Chirundu and Kapiri Mposhi and a third in Livingstone said the suggestion to use condoms was jointly made. The top three reasons cited for non-use of condom at last sex with their wife by most of LDTDs were because they trust their partner (63.8%), did not think a condom was necessary (34.6%) and did not think of a condom (12.4%). Other reasons mentioned by many truck drivers were that they wanted a pregnancy, partner objected and because the partner was using other contraceptives.

Consistent condom use with a wife in the previous twelve months was even lower as only 2.3 percent of all respondents reported using a condom consistently with their wives during the previous twelve months.

Table 11: Condom use at last Sexual Contact and over 12 Months with Wife by Site

Characteristics	Chirundu	Kapiri Mposhi	Livingstone	Total
	n (%)	n (%)	n (%)	N (%)
Condom use at last sexual intercourse with wife				
Yes	27 (4.4)	7 (8.0)	15 (10.0)	49 (5.8)
Total	607	87	150	844
Who suggested condom use with wife				
Myself	7 (26.9)	1 (14.3)	8 (53.3)	16 (33.3)
Partner	3 (11.5)	2 (28.6)	3 (20.0)	8 (16.7)
Joint decision	16 (61.5)	4 (57.1)	4 (26.7)	24 (50.0)
Total	26	7	15	48
Reasons for non-condom use with wife				
Not available	2 (0.3)	0 (0)	1 (0.7)	3 (0.4)
Too expensive	1 (0.2)	0 (0)	0 (0)	1 (0.1)
Partner objected	79 (13.6)	0 (0)	13 (9.6)	92 (11.6)
Don't like them	40 (6.9)	6 (7.5)	13 (9.6)	59 (7.4)
Used other contraceptives	56 (9.7)	4 (5.0)	26 (19.3)	86 (10.8)
Didn't think it was necessary	213 (36.7)	20 (25.0)	51 (37.8)	284 (35.7)
didn't think of it	95 (16.4)	0 (0)	7 (5.2)	102 (12.8)
Itching	1 (0.2)	2 (2.5)	0 (0)	3 (0.4)
Wanted pregnancy	67 (11.6)			
Trusts partner	415 (71.6)	54 (67.5)	55 (40.7)	524 (65.9)
Other	35 (6.0)	16 (20.0)	11 (8.1)	62 (7.8)
Total	580	80	135	795

Characteristics	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)
Condom use over the past 12 months with wife				
Every time	15 (2.4)	3 (3.4)	2 (1.2)	20 (2.3)
Almost every time	7 (1.1)	3 (3.4)	2 (1.2)	12 (1.4)
Sometimes	85 (13.8)	11 (12.4)	42 (25.8)	138 (15.9)
Never	509 (82.6)	72 (80.9)	117 (71.8)	698 (80.4)
Total	616	89	163	868

4.4.2 Condom Use Live-in Partner

LDTDs who said they have ever had sexual intercourse and had sex in last twelve months and agreed that they had had sex with a live-in partner were asked whether they used a condom last time they had sex with this partner. Seventy four said had sex with a live-in partner but only 44 (59.5%) said they used a condom at last sexual intercourse with their live-in partner. In about a third of the times the LDTD suggested use of a condom. Partners objecting and not thinking about a condom were common reasons for not using a condom. **Table 12.**

Table 12: Condom use at Last Sexual Contact and over 12 Months with Live-in Partner by Site

Characteristics	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)
Condom use at last sexual intercourse with live-in partner over past 12 months				
Yes	33 (61.1)	8 (61.5)	3 (42.9)	44 (59.5)
Total	54	13	7	74
Who suggested condom use with live-in partner				
Myself	9 (27.3)	5 (62.5)	1 (33.3)	15 (34.1)
Partner	1 (3.0)	2 (25.0)	0 (0)	3 (6.8)
Joint decision	23 (69.7)	1 (12.5)	2 (66.7)	26 (59.1)
Total	33	8	3	44

Characteristics	Chirundu	Kapiri Mposhi	Livingstone	Total
Reasons for non-condom use with live-in partner				
Not available	3	0	0	3
Too expensive	0	0	0	0
Partner objected	14	0	2	16
Don't like them	2	0	2	4
Used other contraceptives	0	1	1	2
Didn't think it was necessary	13	2	0	15
Didn't think of it	10	0	0	10
Itching	2	1	0	3
She is like my second wife	1	0	0	1
Trusts her	0	1	0	1
Planning to get married	1	0	0	1
Total	21	5	4	30

4.4.3 Condom Use with Regular Partners (Girlfriends)

Table 13 presents data on condom use with the most regular partner other than wife. Slightly more than seventy percent (70.2%) of all the respondents with a regular partner (**n=325**) reported condom use at last sexual intercourse. Chirundu had the highest proportion (72.4%) of respondents who reported condom use at last sex, while the men from Kapiri had the lowest proportion (61.9%). Only about 52 percent (51.8%) of the truck drivers reported consistent condom use with a regular partner (girlfriend) during the previous twelve months and the proportions ranged from as low as 39 percent in Livingstone to a high of only 55.5 percent in Chirundu.

Table 13: Condom Use With Most Regular Partner in Past 12 Months

Characteristics	Chirundu	Kapiri Mposhi	Livingstone	Total
	n (%)	n (%)	n (%)	N (%)
Condom use at last sexual intercourse with regular girlfriend not living together				
Yes	167 (71.7)	13 (61.9)	39 (63.9)	219 (69.5)
Total	233	21	61	315
Who suggested condom use				
Myself	80 (47.9)	8 (61.5)	26 (66.7)	114 (52.1)
Partner	3 (1.8)	0 (0)	1 (2.6)	4 (1.8)
Joint decision	84 (50.3)	5 (38.5)	12 (30.8)	101 (46.1)
Total	167	13	39	219

Characteristics	Chirundu	Kapiri Mposhi	Livingstone	Total
	n (%)	n (%)	n (%)	N (%)
Reason for non condom use				
Not available	8 (12.3)	0 (0)	3 (13.6)	11 (11.6)
Partner objected	12 (18.5)	1 (12.5)	2 (9.1)	15 (15.8)
Don't like them	6 (9.2)	0 (0)	1 (4.5)	7 (7.4)
Used other contraceptives	6 (9.2)	0 (0)	2 (9.1)	8 (8.4)
Didn't think it was necessary	16 (24.6)	4 (50.0)	3 (13.6)	23 (24.2)
Didn't think of it	7 (10.8)	0 (0)	2 (9.1)	9 (9.5)
Could reduce the pleasure	5 (7.7)	1 (12.5)	3 (13.6)	9 (9.5)
Other	7 (10.8)	0 (0)	6 (27.3)	13 (13.7)
Trusted Her	23 (35.4)	5 (62.5)	4 (18.2)	32 (33.7)
Total	65	8	22	95
Condom use over the past 12 months				
Every time	127 (55.5)	10 (50.0)	25 (39.1)	162 (51.8)
Almost every time	28 (12.2)	0 (0)	6 (9.4)	34 (10.9)
Sometimes	40 (17.5)	7 (35.0)	18 (28.1)	65 (20.8)
Never	34 (14.8)	3 (15.2)	15 (23.4)	52 (16.6)
Total	229	20	64	313

4.4.4 Condom Use with Commercial Sexual Workers

Table 14 presents the results of condom use at last sex with commercial sex partners. Condom use at last sexual intercourse with a commercial sex partner was about 93.7 percent among all the groups.

Table 14. Condom use with recent Commercial Sex Worker

Characteristics	Chirundu	Kapiri Mposhi	Livingstone	Total
	n (%)	n (%)	n (%)	N (%)
Condom use at last sexual intercourse with commercial sex worker				
Yes	149 (94.9)	8 (100)	21 (84.0)	178 (93.7)
Total	157	8	25	190
Who suggested condom use				
Myself	102 (68.5)	5 (62.5)	20 (95.2)	127 (71.3)
Partner	1 (0.7)	0 (0)	1 (4.8)	2 (1.1)
Joint decision	46 (30.9)	3 (37.5)	0 (0)	49 (27.5)
Total	149	8	21	178

Characteristics	Chirundu	Kapiri Mposhi	Livingstone	Total
	n (%)	n (%)	n (%)	N (%)
Reason for non-condom use				
Not available	1	0	0	1
Too expensive	0	0	0	0
Partner objected	2	0	0	2
Don't like them	2	0	1	3
Used other contraceptive	0	0	0	0
Didn't think it was necessary	3	0	0	3
Didn't think of it	3	0	0	3
Could reduce pleasure	3	0	0	3
Itching	1	0	0	1
Other	3	0	1	4
Total	8	0	4	12
Condom use over the past 12 months				
Every time	138 (87.9)	8 (100)	20 (80.0)	166 (87.4)
Almost every time	6 (3.8)	0 (0)	2 (8.0)	8 (4.2)
Sometimes	8 (5.1)	0 (0)	1 (4.0)	9 (4.7)
Never	5 (3.2)	0 (0)	2 (8.0)	7 (3.7)
Total	157	8	25	190

All the men (eight out of eight) in Kapiri Mposhi, compared to 21 out of 25 in Livingstone, reported condom use at last sex with a commercial sex worker. In Chirundu, the proportion was 94.9% (149 out of 157). The decision to use condoms was mostly initiated by men (71.3%) especially in Livingstone where about 95 percent of truck drivers said they made the decision to use a condom.

Among reasons for non-use of condoms reported by respondents at the three study sites include the dislike for condoms (3), not thinking of them or that they were not necessary (3) and fear that the condom will reduce pleasure. Non-availability was mentioned only by one truck driver as reason for not using condom.

Consistent condom use with commercial sex partners, defined as using a condom during every act of sexual intercourse with commercial partners in the past twelve months was reported by 87.4 percent of truck drivers. In Kapiri Mposhi, all the eight respondents reported using a condom every time they had sex with a commercial sex worker. Consistent condom use with a commercial sex worker was, however, reportedly lower (20 out of 25 respondents) among Livingstone men compared to those from Chirundu (138 out of 157 respondents or 87.9 percent). See Table 12 above.

4.4.5 Condom Use with Non-regular Partners

Table 15 presents condom use with non-regular sex partners at last sexual intercourse and twelve months prior to survey. Forty one (71.9%) of the 51 truck drivers who had sex with a non-regular sex partner did not use a condom at last sex. Among the respondents who had reported having sex with a non-regular partner, those from

Livingstone reported the lowest levels of condom use at last sex with a non-regular partner (8 out of 13) in comparison to their counterparts from Chirundu (73.8% or 31 out of 42) and both the two men from Kapiri Mposhi reported condom use at last sex.

Table 15: Condom Use with most recent Non-regular Partner

Characteristics	Chirundu	Kapiri Mposhi	Livingstone	Total (n%)
Condom use at last sexual intercourse with non-regular non-commercial partner				
Yes	31	2	8	41 (71.9)
Total	42	2	13	57
Who suggested condom use				
Myself	11	2	7	20 (48.8)
Partner	0	0	1	1 (2.4)
Joint decision	20	0	0	20 (48.8)
Total	31	2	8	41
Reason for non-condom use				
Not available	4	0	0	4
Too expensive	0	0	0	0
Partner objected	3	0	2	5
Don't like them	0	0	1	1
Used other contraceptives	0	0	1	1
Didn't think it was necessary	2	0	1	3
Didn't think of it	2	0	1	3
Reduced pleasure	2	0	0	2
Itching	0	0	0	0
Other	5	0	0	0
Total	11	0	5	19
Condoms in use over the past 12 months				
Every time	31	2	2	35 (62.5)
Almost every time	3	0	1	4 (7.1)
Sometimes	1	0	6	7 (12.5)
Never	6	0	4	10 (17.9)
Total	41	2	13	56

Approximately 49 (48.8%) percent of all respondents who used a condom at last sex with a non-regular partner reported that it was they who suggested condom use. See **Table 15** above. The two truck drivers in Kapiri Mposhi suggested condom use, while seven out of eight of those from Livingstone suggested condom use. Among truck drivers interviewed in Chirundu, only about 35 percent or 11 out of 31 did so.

In instances where condoms were not used at last sex with non-regular partners, the respondents varied in their reasons for non-use. The most commonly cited reasons for non-use encountered in all the three study sites were that the partner objected (5 out of 16 respondents), the customer himself did not think it was necessary (3 out of 16) or

did not just think of it (3 out of 16). Two out of the 16 who responded to the question did not use a condom because of the belief that it reduced sexual pleasure.

4.5 Knowledge, Attitudes and Practices Related to STIs

The following section presents information on knowledge, history of STIs and health seeking behavior of LDTDs. See **Tables 16-17**.

4.5.1 Knowledge and Respondent History of STIs

Table 16 presents the results of the knowledge of STIs among the respondents. Most of the respondents (97.8%) have heard of STIs. The most commonly known STI symptoms in both men and women mentioned across sites were genital discharges.

Most respondents also knew that genital ulcers and abdominal pain were signs of STIs in women and that genital ulcers were an indicator of STIs in men. The truck drivers interviewed in Chirundu were more likely to know symptoms of STIs in women and in men than truck drivers interviewed in Kapiri Mposhi and Livingstone.

Table 16. Knowledge of STIs of LDTDs by Site

Characteristics	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)
Ever heard of STIs				
Yes	695 (99.0)	97 (99.0)	185 (93.4)	977 (97.9)
Total	702	98	198	998
Describe any STI symptoms in women				
Abdominal pain	187 (26.9)	12 (12.4)	57 (30.8)	256 (26.2)
Genital discharge	337 (48.5)	31 (32.0)	71 (38.4)	439 (44.9)
Foul smelling discharge	265 (38.1)	10 (10.3)	40 (21.6)	315 (32.2)
Any discharge	371 (53.4)	32 (33.0)	78 (42.2)	481 (49.2)
Burning pain on urination	194 (27.9)	10 (10.3)	28 (15.1)	232 (23.7)
Genital ulcers/sores	342 (49.2)	33 (34.0)	59 (31.9)	434 (44.4)
Swelling in groin	201 (28.9)	20 (20.6)	32 (17.3)	253 (25.9)
Genital itching	143 (20.6)	4 (4.1)	14 (7.6)	161 (16.5)
Total	695	97	185	977
Number of STIs symptoms known in women (scores)				
0	223 (33.7)	33 (45.2)	81 (44.8)	337 (36.8)
1	34 (5.1)	6 (8.2)	20 (11.0)	60 (6.6)
2	92 (13.9)	12 (16.4)	19 (10.5)	123 (13.4)
3	101 (15.3)	12 (16.4)	32 (17.7)	145 (15.8)
4	80 (12.1)	2 (2.7)	13 (7.2)	95 (10.4)
5+	132 (19.9)	8 (11.0)	16 (8.8)	156 (17.0)
Total	662	73	181	916

Characteristics	Chirundu	Kapiri Mposhi	Livingstone	Total
	n (%)	n (%)	n (%)	N (%)
Describe any STIs symptoms in men				
Genital discharge	497 (75.1)	63 (86.3)	142 (78.5)	702 (76.6)
Burning pain on urination	357 (53.9)	36 (49.3)	76 (42.0)	469 (51.2)
Genital ulcers/sores	487 (73.6)	53 (72.6)	126 (69.6)	666 (72.7)
Swelling in groin area	321 (48.5)	37 (50.7)	90 (49.7)	448 (48.9)
Total	662	73	181	916
Number of STIs symptoms known in men (scores)				
0	74 (11.2)	8 (11.0)	12 (6.6)	94 (10.3)
1	66 (10.0)	3 (4.1)	27 (14.9)	96 (10.5)
2	192 (29.0)	18 (24.7)	58 (32.0)	268 (29.3)
3	108 (16.3)	26 (35.6)	45 (24.9)	179 (19.5)
4	222 (33.5)	18 (24.7)	39 (21.5)	279 (30.5)
Total	662	73	181	916

4.5.2 Health Seeking Behavior for STIs

Table 17 presents the results of the health seeking behavior of the respondents. Almost 6 percent gave a history of either genital discharge or ulcer related STIs in past twelve months prior to survey, with Livingstone reporting higher proportions (10.8%) of reported STI symptoms compared to Chirundu (4.4%) or Kapiri Mposhi (6.1%). The difference between sites is statistically significant ($p < 0.003$).

When asked where they went to seek treatment for their last STI, most respondents reported going to a government health facility (63.6%), private health facility (36.4%), or chemist (23.6%). Only 14.5 percent of all respondents reported seeking treatment at the COH Drop-in Center for their last STI treatment. In Chirundu, respondents mainly reported this while no single trucker from either Kapiri Mposhi or Livingstone reported seeking treatment/advice from COH Drop-in Center. A number of respondents consulted traditional healers (21.8%) while 18.2 percent said they bought capsules from the streets.

Respondents were also asked about their sexual behavior when they had an STI. None of the 21 truck drivers from Livingstone told their partner about the STI or used condoms consistently. Only two out of the 21 respondents stopped having sex when they were having an STI symptom. Over all, only 16.4 percent (9 out of 55) stopped having sex, 5.5 percent (3 out of 55) always used a condom and 12.7 percent (7 out of 55) told their partner of their STI condition.

Table 17: Health-seeking Behavior related to STIs of LDTDs by Site

Characteristics	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)
History of STD symptoms in the past 12 months				
Genital discharge	24 (3.4)	5 (5.1)	20 (9.9)	49 (4.9)
Genital ulcer/sores	18 (2.5)	2 (2.0)	7(3.4)	27 (2.7)
Genital discharge or ulcer/sores	31 (4.4)	6 (6.1)	22 (10.8)	59 (5.8)
Total	706	99	203	1,008
Behavior the last time had STD Symptoms				
Sought advice from government health facility	14	2	19	35 (63.6)
Sought advice from workplace health facility	3	0	9	12 (21.8)
Sought advice from church health facility	0	0	3	3 (5.5)
Sought advice from private health facility	14	1	5	20 (36.4)
Sought advice from any of the 4 above	25	3	21	49 (89.1)
Sought advice from chemist	8	1	4	13 (23.6)
Sought advice from traditional healer	6	0	6	12 (21.8)
Bought capsules on the street	9	0	1	10 (18.2)
Took medicine had at home	5	0	2	7 (12.7)
Sought treatment from COH	8	0	0	8 (14.5)
Stopped having sex	5	2	2	9 (16.4)
Always used a condom	3	0	0	3 (5.5)
Told partner	6	1	0	7 (12.7)
Total	29	5	21	55

5 KNOWLEDGE AND BELIEFS ABOUT HIV/AIDS

5.1 Awareness of HIV/AIDS

As with knowledge on condoms and STIs, knowledge on HIV/AIDS⁴ was almost universal, with 98.3 percent saying they had heard of HIV/AIDS (**Table 18**).

⁴ The knowledge indicators are composite indicators, the “knowledge of prevention methods” indicator tested complete knowledge of the most common HIV prevention methods (abstinence, be faithful to one uninfected partner) but condom use was by mistake omitted in final questionnaire. The “No Incorrect Beliefs about AIDS” indicator tested correct understanding regarding the most common misconceptions about HIV. To achieve a pass in that indicator, the respondent had to answer that: a healthy -looking person can be HIV infected; you cannot be infected by a mosquito, or by sharing a meal with an infected person. Comprehensive knowledge about AIDS was defined as having answered

Furthermore, very high proportions (78%) knew of someone that had HIV/AIDS and 38.3 percent and 26.5 percent respectively had a relative or close friend or both (28.5%) who had HIV/AIDS.

5.2 Knowledge and Misconceptions about HIV Transmission

Table 18 presents the findings of knowledge of HIV transmission. The levels of knowledge among truck drivers varied between sites. Most (97.6%) of the respondents knew that HIV could be spread through using infected needles. About 98.1 percent of the LDTDs interviewed in Chirundu and 96.9 percent of LDTDs in Kapiri Mposhi knew that infected needles can transmit HIV, while 95.6 percent of LDTDs from Livingstone knew about infected needles. The majority (81.1%) of the respondents (84.2% in Chirundu, 75.5% in Kapiri Mposhi and 72.5% in Livingstone) also knew that HIV could be transmitted through mother-to-child transmission. The difference between sites was statistically significant ($p=0.001$), with LDTDs interviewed in Chirundu having better knowledge on HIV transmission. Knowledge about breast milk transmission of HIV was moderately high with 73.6 percent who thought this was possible but the differences between sites were statistically significant ($p=0.001$). About eighty four percent from Livingstone, 78.6% from Kapiri Mposhi and 70.3% from Chirundu knew that this could occur through breast-feeding. However, misconceptions about HIV transmission still exist. A higher proportion (13.8%) of the respondents (23.5% from Kapiri Mposhi, 13.3% from Chirundu and 10.4% from Livingstone) thought that mosquitoes can transmit HIV. The difference in misconception about mosquito transmitting HIV among truck drivers was statistically significant between sites ($p=0.008$).

5.3 Knowledge of HIV Prevention

Table 17 shows the proportion of respondents that know that abstinence and faithfulness are HIV preventive measures. More respondents (94%) mentioned abstinence as a way to prevent HIV, being faithful represented 90.9 percent. More than a half (51.2%) thought taking anti-retroviral drugs (ARVs) prevents HIV (50.5% from Livingstone, 29.6% from Kapiri Mposhi and 54.4% from Chirundu). The differences in the misconception was statistically significant according to site the truck driver was interviewed from ($p=0.001$). Nearly 96 percent said they knew that a healthy looking person can be infected with HIV and in all sites this level of knowledge was about 95 percent and above.

all the questions in the two composite indicators above correctly. The criteria for accepting attitudes towards people with HIV were also strict. To achieve a pass mark in that indicator, respondents had to state: that they would be willing to care for a member of their family in their household if they became sick with AIDS, that a teacher who has the AIDS virus but is not sick should be allowed to continue teaching in school and that they would buy food from a shopkeeper or food seller who had the AIDS virus.

Table 18: Knowledge, Opinions, and Attitudes related to HIV of LDTDs by Site

Characteristics	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)
Ever heard of HIV				
Yes	701 (99.9)	98 (100)	182 (91.9)	981 (98.3)
Total	702	98	198	998
Knows someone with HIV/AIDS				
Yes	543 (77.6)	83 (84.7)	136 (75.1)	762 (77.8)
No	152 (21.7)	15 (15.3)	44 (24.3)	211 (21.6)
Don't know	5 (0.7)	0 (0)	1 (0.6)	6 (0.6)
Total	700	98	181	979
Has close relative or friend with HIV/AIDS				
Close relative	193 (35.7)	24 (28.9)	74 (54.4)	291 (38.3)
Close friend	122 (22.6)	36 (43.4)	43 (31.6)	201 (26.5)
Both	198 (36.7)	14 (16.9)	4 (2.9)	216 (28.5)
No	27 (5.0)	9 (10.8)	15 (11.0)	51 (6.7)
Total	540	83	136	759
Thinks that a person can get HIV from:				
Mosquito bites	93 (13.3)	23 (23.5)	19 (10.4)	135 (13.8)
Sharing meals	25 (3.6)	21 (21.4)	24 (13.2)	70 (7.1)
Infected needles	688 (98.1)	95 (96.9)	174 (95.6)	957 (97.6)
Mother to child during pregnancy	590 (84.2)	74 (75.5)	132 (72.5)	796 (81.1)
Breast feeding	493 (70.3)	77 (78.6)	152 (83.5)	722 (73.6)
Total	701	98	182	981
Knows that people can prevent HIV by:				
Faithfulness	650 (92.7)	97 (99.0)	145 (79.7)	892 (90.9)
Abstinence	672 (95.9)	96 (98.0)	154 (84.6)	922 (94.0)
Taking medication ARVs	381 (54.4)	29 (29.6)	92 (50.5)	502 (51.2)
Total	701	98	182	981
Knows that a healthy-looking person can be infected				
Yes	665 (94.9)	96 (98.0)	175 (97.2)	936 (95.6)
No	31 (4.4)	1 (1.0)	4 (2.2)	36 (3.7)
Don't know	5 (0.7)	1 (1.0)	1 (0.6)	7 (0.7)
Total	701	98	180	979

5.4 Attitudes toward People with HIV/AIDS

The survey included a series of questions aimed at exploring the respondents' views about the extent of HIV stigmatization. Although the degree varies between sites, the overall results of this section, which can be seen below in **Table 19**, have shown that

some amount of stigma and discrimination still exists. The findings showed that the majority (97.2%) of all respondents felt that an HIV-positive student should be allowed to continue with school.

Similarly, most of the respondents (97%) felt that HIV-positive teachers should be able to continue teaching. Ninety-seven percent said they would take care of an HIV-positive relative. A total of ninety-seven percent of truck drivers (96.6% from Livingstone, 96.9% from Kapiri Mposhi and 99.3% from Chirundu) expressed that they would take care of an HIV-positive relative and 82 percent said they would buy food from shop keepers known to be HIV-positive. About 27 percent (29.4% from Livingstone, 15.6% from Kapiri Mposhi and 27.6% from Chirundu) indicated that they would want to keep the HIV-positive status of a relative a secret.

There appears to be some level of stigma and discrimination amongst all the groups with regards to buying food from HIV-positive people. When asked whether or not they would buy food from a shopkeeper with HIV, 81.8 percent of the respondents said they would. The proportions of respondents who would not be willing to buy food from an HIV-positive shopkeeper ranged from 18.6 percent in Chirundu to about 26 percent in Kapiri Mposhi.

Table 19: Attitudes toward People with HIV/AIDS among LDTDs by Site

Characteristics	Chirundu	Kapiri Mposhi	Livingstone	Total
	n (%)	n (%)	n (%)	N (%)
Feels HIV+ students should be allowed to continue school				
Yes	672 (97.7)	93 (95.9)	167 (96.0)	932 (97.2)
Total	688	97	174	959
Feels HIV+ teachers should continue teaching				
Yes	679 (97.8)	86 (90.5)	172 (97.2)	937 (97.0)
Total	694	95	177	966
Would take care of HIV+ female relative				
Yes	696 (99.3)	95 (96.9)	172 (96.6)	937 (97.0)
Total	701	98	178	977
Would buy food from shopkeeper known to be HIV+				
Yes	568 (82.4)	71(74.0)	145 (83.3)	784 (81.8)
Total	689	96	174	959
If a member of family has HIV, would like it to remain a secret				
Yes	190 (27.6)	15 (15.6)	52 (29.4)	257 (26.7)
Total	689	96	177	962

6 HIV VOLUNTARY COUNSELLING AND TESTING

The respondents were asked a series of questions pertaining to access and use of voluntary counseling and testing services. The findings show that many respondents (88.7%) reported having access to confidential HIV testing, though this varied statistically significant ($p=0.001$) between survey sites. Approximately 93.3 percent of the truck drivers in Chirundu and 89.4 percent of respondents in Livingstone reported having access to confidential HIV testing while only 55.1 percent of those in Kapiri Mposhi reported access to such services. Approximately 22 percent of the respondents (23.3% from Chirundu, 23.5% from Kapiri Mposhi and 17.2% from Livingstone) had ever been tested for HIV. The difference between sites was not statistically significant ($p=0.207$).

Among those tested, 97.1 percent (98.1% in Chirundu, 90.9% in Kapiri and 96.3% in Livingstone) found out the results of their HIV test. Among the 217 who said ever tested for HIV, 181 or 83.4 percent said that they took the test voluntarily. **Table 20** presents the findings of the access and use of VCT services.

Table 20: Voluntary HIV Counseling and Testing among LDTDs by Site

Characteristics	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)
Access to confidential testing for HIV				
Yes	654 (93.3)	54 (55.1)	161 (89.4)	869 (88.8)
Total	701	98	180	979
Ever been tested				
Yes	163 (23.3)	23 (23.5)	31(17.1)	217 (22.2)
Total	700	98	181	979
Voluntary tested				
Yes	139 (85.3)	18 (78.3)	24 (77.4)	181 (83.4)
Total	163	23	31	217
Found out the result (of those tested voluntarily)				
Yes	138 (99.3)	17 (94.4)	23 (95.8)	178 (98.3)
Total	139	18	24	181

7 PROJECT INDICATORS

Table 21 shows results of variables aimed at measuring some project outcomes. Five behavioral indicators were defined as project indicators. Indicator 1 measures knowledge of STI symptoms. Approximately 83 percent of the men (81.4% from Chirundu, 94.3% from Kapiri Mposhi and 82.8% from Livingstone) could cite at least two major STI symptoms in men. The difference between sites is statistically significant.

Indicator 2 measures knowledge of HIV prevention. About 89.3 percent (91% from Chirundu, 96.9% from Kapiri Mposhi and 98.4 from Livingstone) could mention at least two HIV prevention strategies. The differences between sites is statistically significant ($p=0.001$). Indicator 3 measures condom availability. Close to 86 percent (87.9% in Chirundu, 88% in Livingstone and 65.6% in Kapiri Mposhi) reported easy access to condoms in the last sexual act. The difference is statistically significant ($p=0.001$). Indicator 4 measures condom use with a commercial partner. About 94 percent (94.9 % in Livingstone, all the eight in Kapiri Mposhi and 21 of the 25 in Chirundu) of the men reported that they used a condom in the last commercial sex act. Indicator 5 measures condom use with casual partners. About 72 percent (73% in Chirundu, both men in Kapiri Mposhi and eight of the 13 in Livingstone) reported condom use in the last sex act with a casual partner (non-regular partner/non-commercial sex worker).

Table 21: Project Indicators for LDTDs by Site

Response	Chirundu n (%)	Kapiri Mposhi n (%)	Livingstone n (%)	Total N (%)	p-value
% who can correctly cite at least two major symptoms in men					
Yes	515 (81.4)	50 (94.3)	140 (82.8)	705 (82.5)	p=0.057
Total	633	53	169	855	
% who can correctly cite at least two HIV prevention strategies					
Yes	634 (91.0)	95 (96.9)	138 (98.4)	867 (89.3)	p<0.001
Total	697	98	176	971	
% who reported easy access to condom in <15 minutes					
Yes	523 (87.9)	59 (65.6)	120 (88.2)	702 (85.5)	p<0.001
Total	595	90	136	821	
% who reported condom use in last commercial sex act					
Yes	149	8	21	178 (93.7)	na
Total	157	8	25	190	
% who reported condom use in last casual sex act					
Yes	31	2	8	41 (71.9)	na
Total	42	2	13	57	

8 CHANGES AND TRENDS IN SELECTED VARIABLES: 2000-2006

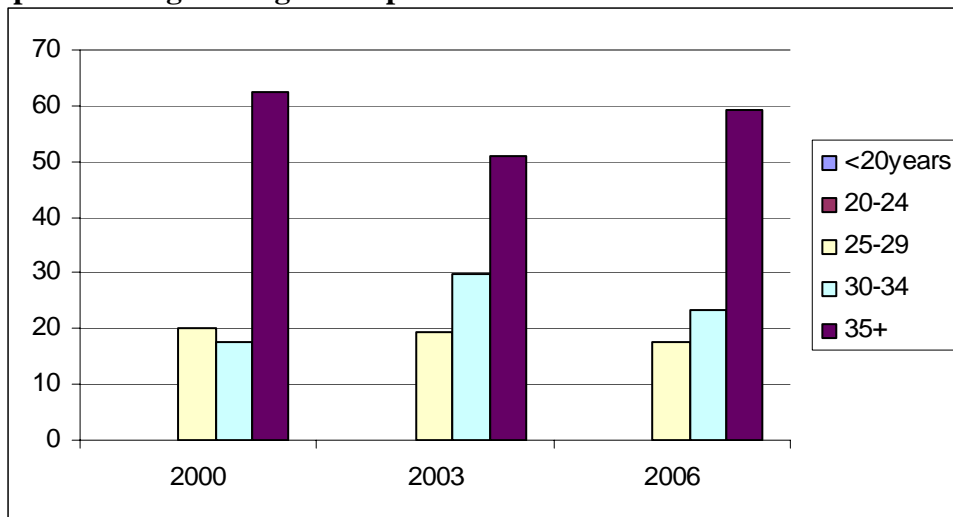
This section provides a comparison of selected results and trends of key variables between the 2000 and 2006 surveys. Only two sites (i.e. Chirundu and Livingstone) that participated in the three surveys (2000, 2003 and 2006) are included in this comparison section.

8.1 Changes in Socio-demographic Characteristics of the LDTDs

Table 22 shows trends in selected socio-economic and demographic characteristics of the truck drivers captured in the surveys. Graph 1 shows the age distribution of all the truck drivers interviewed. In general, the LDTDs were older in 2006 than they were in 2000 ($p=0.001$).

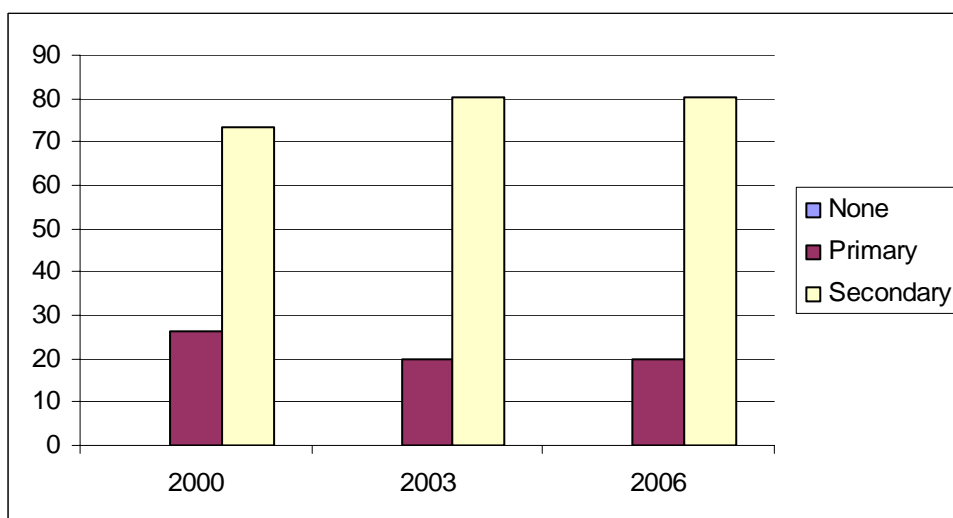
In terms of age according to sites, the proportion of truck drivers under 30 years was 15.9 percent, 10.2 percent and 20.7 percent in 2000, 2003 and 2006 respectively in Livingstone while the same age group was 24.1 percent, 21.8 percent and 16.6 percent respectively in Chirundu. The results show a statistically significant decline in the proportion of LDTDs aged under 30 years in both Chirundu and Livingstone between 2000 and 2006 ($p < 0.001$ and $p = 0.010$).

Graph 1: Changes in Age Group Distribution all Sites Combined



With regard to education level, the results over the time period show an increase in the percentage of respondents with secondary or higher level of education--from 71.2 percent to 76 percent in Livingstone and from 75.6 percent to 81.3 percent in Chirundu between 2000 and 2006.

Graph 2: Changes in Education Level all Sites Combined



Marital status results show that between 2000 and 2006 in Livingstone there was a slight reduction in the proportion of truck drivers currently married--from 86.7 percent to 83.0 percent. In Chirundu, slightly more were married--from 89.3 percent to 89.7 percent.

Table 22: Changes in Socio-demographic Characteristics of the LDTDs by Site

Characteristics	LIVINGSTONE				CHIRUNDU			
	BSS2000	BSS2003	BSS2006	p value	BS2000	BS2003	BSS2006	p-value
	n (%)	n (%)	n (%)		n (%)	n (%)	n (%)	
Age (years)				0.010				0.001
<30	44 (15.9)	13 (10.2)	42 (20.7)		70 (24.1)	101 (21.8)	117 (16.6)	
30-34	49 (17.7)	37 (28.9)	33 (16.3)		51 (17.5)	139 (30.0)	177 (25.1)	
35+	184 (64.4)	78 (60.9)	128 (63.1)		170 (58.4)	224 (48.3)	411 (58.3)	
Total	277	128	203		291	464	705	
Education level				0.226				0.078
Up to primary school	80(28.8)	31(24.2)	48(24.0)		71(24.4)	86(18.5)	127(18.7)	
Secondary or higher	198 (71.2)	97 (75.8)	152 (76.0)		220 (75.6)	378 (81.5)	551 (81.3)	
Total	278	128	200		291	464	678	
Marital status				0.305				0.779
Currently married	241 (86.7)	114 (91.2)	166 (83.0)		260 (89.3)	410 (88.6)	624 (89.7)	
Not currently married	37(13.3)	11(8.8)	34(17.0)		31(10.7)	53(11.4)	72(10.3)	
Total	278	125	200		291	463	696	

8.2 Trends in Behavioral Characteristics

8.2.1 Alcohol and Drug Use

There was no statistically significant increase noted in alcohol consumption between 2000 and 2006--11.1 percent vs. 11.5 percent (Graph 3). **Table 23** presents trends in alcohol and substance use between 2000 and 2006. Daily alcohol consumption declined slightly from 11.5 percent to 9.9 percent in Livingstone but increased slightly from 10.7 to 11.9 percent in Chirundu between 2000 and 2006. On the other hand, the proportions of truck drivers who had ever used drugs (dagga) increased slightly in Livingstone from 13.3 percent to 24.1 percent between 2000 and 2006. In Chirundu the proportion of truck drivers who reported having ever taken dagga increased slightly from 13.4 percent to 15.3 percent during the same period.

Graph 3: Trend in Daily Alcohol Consumption all Sites Combined

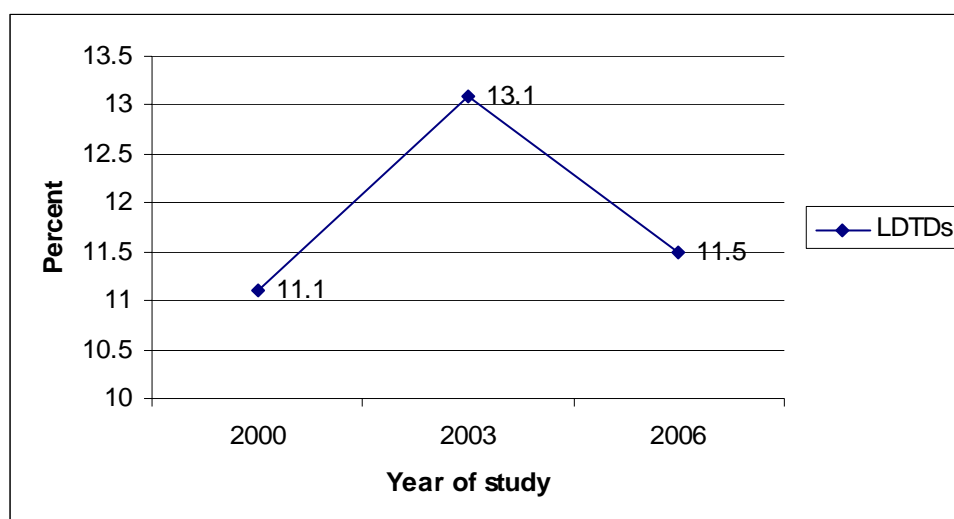


Table 23: Trends in Alcohol and Drug use among LDTDs by Site

Characteristics	LIVINGSTONE				CHIRUNDU			
	BSS2000	BSS2003	BSS2006	p-value for trend	BS2000	BS2003	BSS20206	p-value for trend
	n (%)	n (%)	n (%)		n (%)	n (%)	n (%)	
Daily alcohol use in past four weeks				0.085				0.583
Yes	32 (11.5)	24 (18.9)	20 (9.9)		31 (10.7)	53 (11.5)	84 (11.9)	
Total	278	127	203		290	461	704	
Ever used drugs (dagga)				0.003				0.720
Yes	37(13.3)	15 (11.7)	49 (24.1)		39 (13.4)	82 (17.7)	108 (15.3)	
Total	278	128	203		291	462	706	

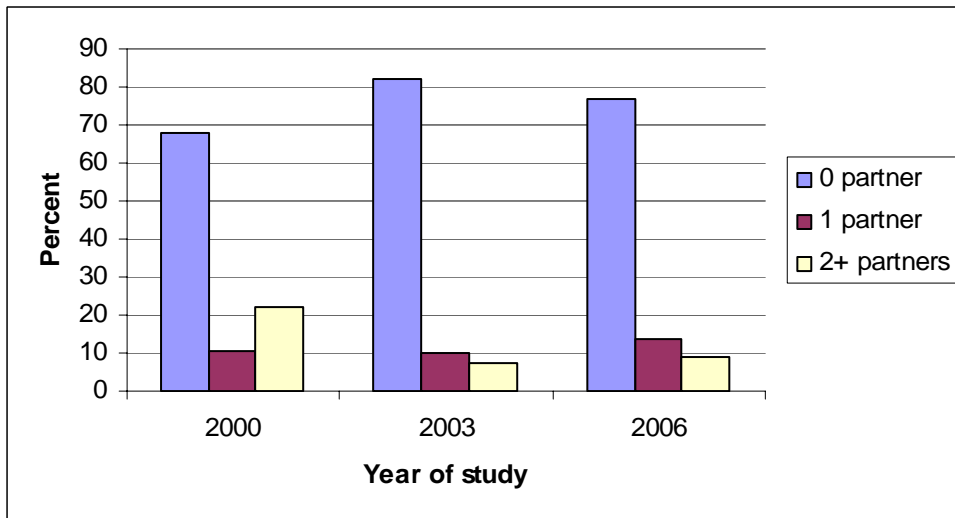
8.2.2 Sexual Risk Behaviors

In all the surveys, truck drivers were asked if they had sex during the twelve months preceding the survey with different types of sex partners i.e. regular, commercial or non-regular (**Graphs 4, 5 and 6**). When data of 2006 are compared with that of 2000, the number of LDTDs who did not have sex with sex workers increased and those reporting transactional sex with two or more reduced ($p=0.001$), number reporting reduction in sex with regular sex partners and non-regular and non-FSWs also reduced statistically significantly ($p=0.001$).

Table 24 shows an increase in the proportion of truck drivers from Livingstone who did not have sexual encounters with commercial sex partners (79.2% in 2000, and 83.9% in 2006) although the differences are not statistically significant ($p=0.479$). Also, the proportions of truck drivers who had sexual contact with two or more commercial sex workers declined from about 11.3 percent in 2000 to 6.7 percent in 2005. A similar pattern is also observed with regard to contact with regular (from 24.3% to 6.7 %), and non-regular, non-commercial sex partners (from 5.3% to 2.2%) between 2000 and 2006.

An examination of the results from Chirundu also shows a significant increase in the proportion of truck drivers who had not had sexual encounters with commercial sex workers. Further, the data show a reduction in the number of encounters with commercial sex workers and other types of sexual partners among those who had such encounters. For example, the proportion of truck drivers who did not have sexual contact with commercial sex workers increased from 56.8 percent in 2000 to 75.3 percent in 2006 while the proportion who had sexual contacts with two or more commercial sex workers declined from 32.2 percent in 2000 to 9.7% in 2006. Additionally, the proportion of respondents who reported having two or more regular sex partners declined significantly from 17.6 to 3.9 percent ($p<0.001$), those reporting sex with more than two commercial sex workers declined from 32.2 percent to 9.7 percent ($p<0.001$) and from 10.0 percent to 1.2 percent for those reporting sex with non-regular sex partners ($p<0.001$) between 2000 and 2006.

Graph 4: Proportion of LDTDs who had Sex with Paying Clients (FSWs) past 12 Months



Graph 5: Proportion of LDTDs who had Sex with Regular Girlfriends (permanent sex partners) past 12 Months

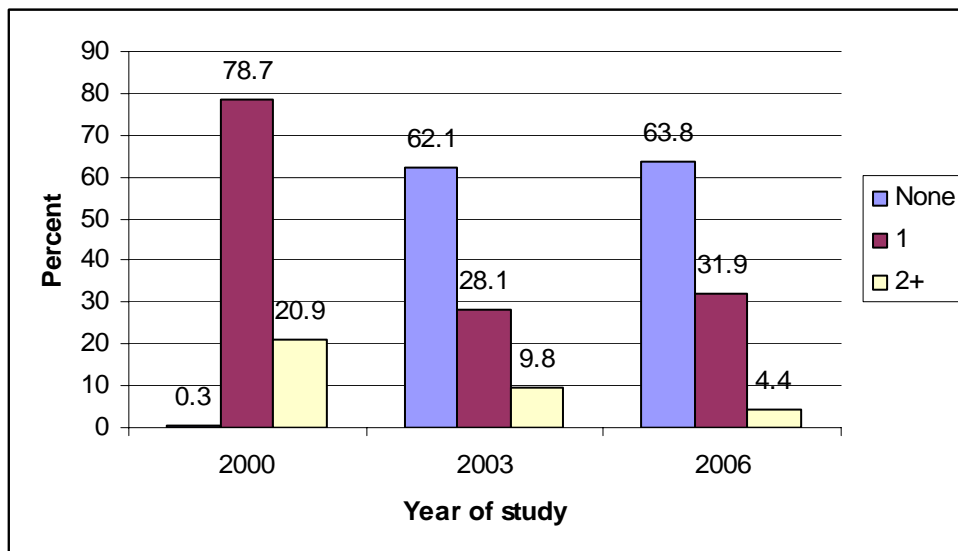
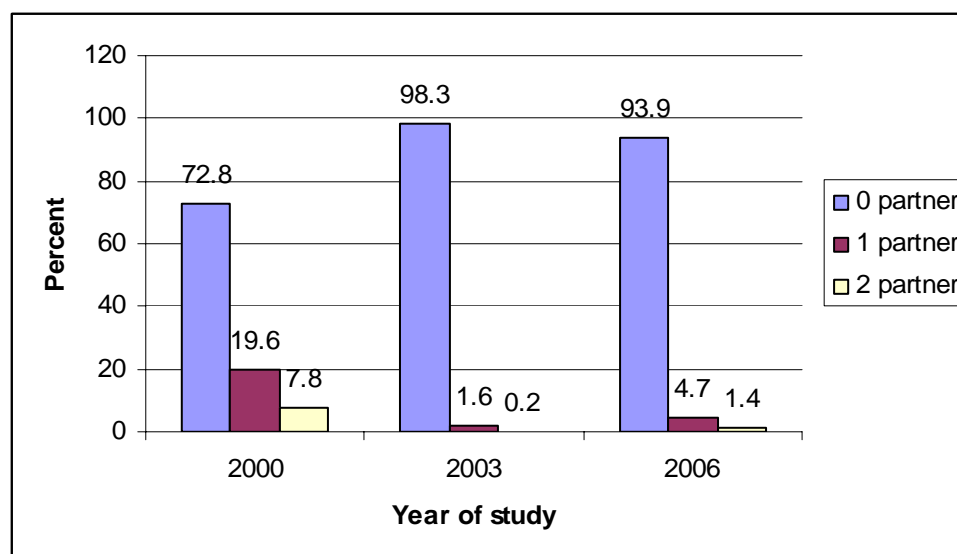


Table 24: Changes in Sexual Risk Behaviors among LDTDs by Site

Characteristics	LIVINGSTONE				CHIRUNDU			
	BSS2000	BSS2003	BSS2006	p-value	BS2000	BS2003	BSS2006	p-value
	n (%)	n (%)	n (%)		n (%)	n (%)	n (%)	
Mean age at first sex	17.9	18.2	17.6		18.3	18.1	18.9	
Number of regular sex partners				0.001				0.001
0	2 (0.8)	97 (80.8)	151 (83.9)		0	285 (63.6)	423 (64.1)	
1	191 (74.9)	9 (7.5)	179 (9.4)		220(82.4)	123 (27.5)	211 (32.0)	
2+	62 (24.3)	14(11.7)	12 (6.7)		47(17.6)	40 (8.9)	26 (3.9)	
Total	255	120	344		267	448	660	
Number of commercial sex partners				0.479				0.001
0	210 (79.2)	97 (80.8)	151 (83.9)		159 (56.8)	350 (82.7)	487 (75.0)	
1	25 (9.4)	9 (7.5)	17 (9.4)		31 (11.1)	46 (10.9)	98 (15.1)	
2+	30 (11.3)	14 (11.7)	12 (6.7)		90 (32.2)	27 (6.4)	64(9.9)	
Total	265	120	180		280	423	649	
Number of non-regular, non commercial sex partner				p=na				0.001
0	204 (76.7)	125 (100)	168 (93.3)		194 (69.0)	440 (97.8)	618 (94.1)	
1	48 (18.0)	0 (0)	8 (4.4)		59 (21.0)	9 (2.0)	31 (4.70)	
2+	14 (5.3)	0 (0)	4 (2.2)		28 (10.0)	1 (0.2)	8 (1.2)	
Total	266	125	182		281	450	657	

Graph 6: Proportion of LDTDs who had Sex with Non-Regular/Non-FSW past 12 Months



8.2.3 Trends in Knowledge among Truck Drivers

Knowledge indicators measured the respondents' knowledge with regard to prevention of HIV/AIDS and misconceptions about the transmission of HIV infection and risk. **Table 25** presents trends in HIV/AIDS-related knowledge between 2000 and 2006 among truck drivers from Livingstone and Chirundu.

In Livingstone, there was a significant decline (from 93% to 87%) among truck drivers who said people can protect themselves from HIV by abstaining from sexual intercourse, ($p=0.040$). There was also a decline, not statistically significant (from 83% to 81%), in the proportion of truck drivers who knew that people can protect themselves from HIV by having one faithful, non-infected sex partner ($p=0.736$).

In contrast, in Chirundu, the proportions of respondents who knew these two practices (abstinence and faithfulness) to be HIV-preventive measures increased statistically significantly from 88.2 percent to about 96.0 percent ($p<0.001$) for abstinence, and from 84.4 percent to 93.1 percent ($p<0.001$) for faithfulness respectively.

Table 25: Trends in knowledge of HIV Prevention among LDTDs by Site

Characteristics	LIVINGSTONE				CHIRUNDU			
	BSS2000	BSS2003	BSS2006	p-value	BS2000	BS2003	BSS2006	p-value for trend
	n (%)	n (%)	n (%)		n (%)	n (%)	n (%)	
Ever heard of HIV				<0.001				0.357
Yes	273 (100)	128 (100)	182 (91.9)		289 (100)	458 (100)	701 (99.9)	
Total	273	128	198		289	458	702	
Knows abstinence can prevent HIV				0.040				0.001
Yes	254 (93.0)	125 (97.7)	154 (87.0)		255 (88.2)	410 (89.7)	672 (96.0)	
Total	273	128	177		289	457	700	
Knows being faithful can prevent HIV				0.736				0.001
Yes	226 (82.8)	119 (93.0)	145 (80.6)		244 (84.4)	409 (89.5)	650 (93.1)	
Total	273	128	180		289	457	698	
Thinks HIV can be transmitted through mosquito bites				0.261				0.001
Yes	43 (15.8)	29 (22.7)	35 (19.4)		51 (17.6)	117 (25.6)	48 (6.9)	
Total	273	128	180		289	457	698	
Thinks HIV can be transmitted through sharing a meal				$p<0.001$				0.006
Yes	15 (5.5)	10 (7.8)	40 (22.2)		26 (9.0)	48 (10.5)	36 (5.1)	
Total	273	128	180		289	457	701	

In Livingstone, the proportion of respondents with the misconceptions that HIV can be transmitted through mosquito bites increased slightly from 15.8 percent to 19.4 percent between 2000 and 2006. But there was a statistically significant increase from 5.5 percent to 22.2 percent ($p < 0.001$) in misconception that HIV can be transmitted through sharing a meal with an HIV-positive individual. This is in sharp contrast to Chirundu where the proportions of respondents with these misconceptions declined from 17.6 to 6.9 percent ($p < 0.001$) and from 9 to 5.1 percent ($p = 0.006$) between 2000 and 2006 both of which are statistically significant.

8.2.4 Trends in Condom Use among Truck Drivers

Graph 7 below presents condom use among truck drivers at last sex with FSWs and non-regular/non-FSWs at all sites combined. There was no statistically significant change in trend. **Table 26** presents data on the proportions of truck drivers who had sexual contacts with commercial sex workers and non-regular sex partners. The results from Livingstone show that the proportion of truck drivers who used a condom at last sex declined from 92.9 percent to 84.0 percent but was not statistically significant ($p = 0.201$) while consistent condom use with a commercial sex worker also declined from 92.9 percent to 80.0 percent but was also not statistically significant (0.060) between 2000 and 2006. In Chirundu, however, both condom use and consistent condom use with a commercial sex partner twelve months preceding the survey increased slightly from 93.5 percent to 94.9 percent and from 80.6 percent to 87.9 percent, respectively, in the same period.

Graph 7: Condom Use at Last Sex with FSWs and Non-Regular/Non-FSWs.

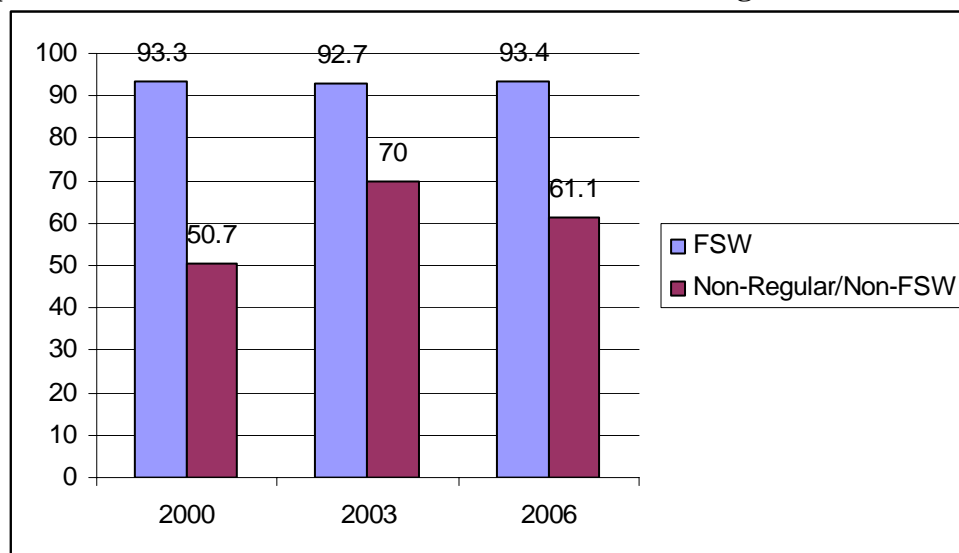


Table 26: Trends in Condom Use

Characteristics	LIVINGSTONE				CHIRUNDU			
	BSS2000	BSS2003	BSS2006	p-value	BS2000	BS2003	BSS20206	p-value for trend
	n (%)	n (%)	n (%)		n (%)	n (%)	n (%)	
Condom use at last sex with CSW				0.201				0.631
Yes	52 (92.9)	24 (85.7)	21 (84.0)		116 (93.5)	90 (94.7)	149 (94.9)	
Total	56	28	25		124	95	157	
Consistent condom use 12 months prior to survey with CSW				0.060				0.095
Yes	52 (92.9)	20 (71.4)	20 (80.0)		100 (80.6)	82 (86.3)	138 (87.9)	
Total	56	28	25		124	95	157	
Condom use last sex with non-regular partner				0.548				0.753
Yes	44 (71.0)	1	8		69 (77.5)	9	31 (73.80)	
Total	62	1	13		89	9	42	
Consistent condom use 12 months prior to survey with non-regular partner				0.074				0.024
Yes	27 (44.3)	1 (100)	2 (15.4)		49 (55.1)	6 (66.7)	31 (75.6)	
Total	61	1	13		89	9	41	

8.2.5 Trends in Knowledge and History of STIs among Truck Drivers

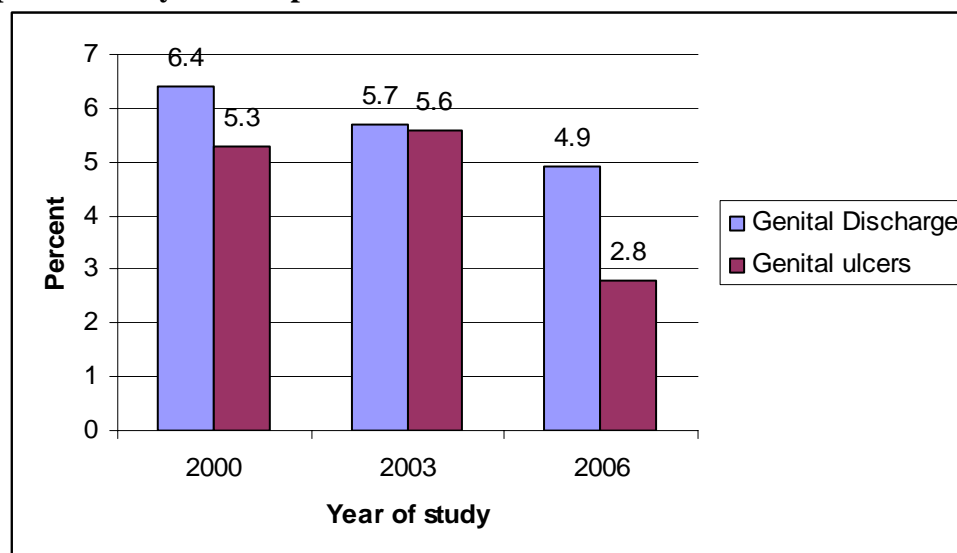
Table 27 presents trends in knowledge and history of STIs. The proportions of respondents who correctly cited two or more STI symptoms in men increased statistically significantly in Livingstone from 74.8 percent to 82.8 percent ($p=0.016$) but not in Chirundu ($p=0.136$).

Graph 8 presents combined proportions of LDTDs who gave history of STIs. There was a statistically significant reduction in LDTDs reporting STIs in 2006 compared to 2000 ($p=0.017$). In Livingstone the proportion of LDTDs with a history of a genital discharge-related STI in the past twelve months increased from 5.5 percent to 10.1 percent between 2000 and 2006 while there was a reduction among respondents interviewed in Chirundu from 7.3 percent to 3.4 percent which was statistically significant (0.009). Among respondents interviewed in Livingstone, the proportion reporting a history of genital ulcers/sores declined from 4.8 to 3.5 percent while in Chirundu the decline was statistically significant (0.004) from 5.5 percent to 2.6 percent.

Table 27: Trends in Knowledge and History of STIs among LDTDs by Site

Characteristics	LIVINGSTONE				CHIRUNDU			
	BSS2000	BSS2003	BSS2006	p-value	BS2000	BS2003	BSS2006	p-value trend
	n (%)	n (%)	n (%)		n (%)	n (%)	n (%)	
Can correctly cite two or more STI symptoms in men				0.016				0.136
Yes	199 (74.8)	108 (91.5)	140 (82.8)		215 (77.3)	325 (78.7)	515 (81.4)	
Total	266	118	169		278	413	633	
History of genital discharge in the past 12 months				0.060				0.009
Yes	15 (5.5)	11 (8.6)	20 (10.1)		21 (7.3)	21 (4.8)	24 (3.4)	
Total	273	128	198		289	437	703	
History of genital ulcers/sores in the past 12 months				0.770				0.004
Yes	13 (4.8)	16 (12.5)	7 (3.5)		17 (5.9)	31 (6.8)	18 (2.6)	
Total	273	128	198		289	459	703	

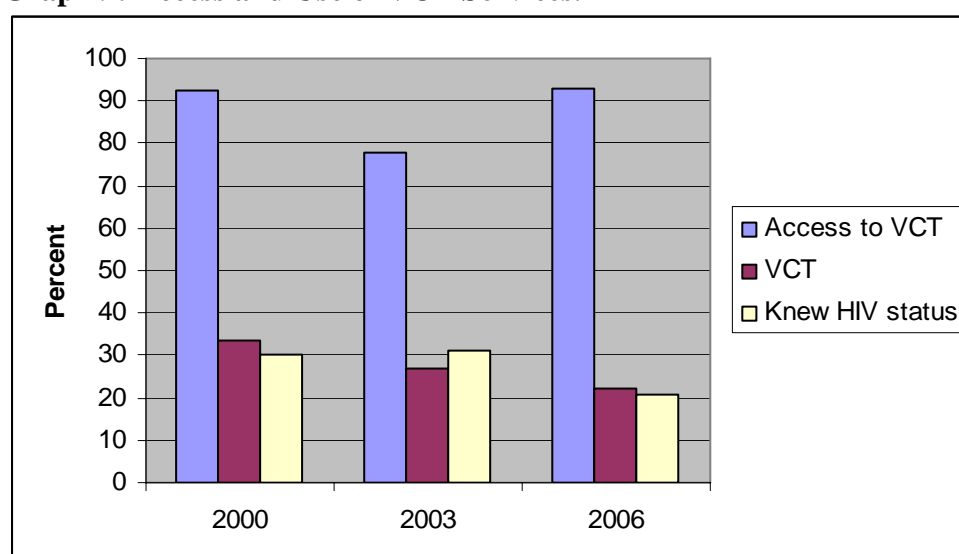
Graph 8: History of STIs past 12 Months



8.2.6 Trends in VCT Access and Use among Truck Drivers

Table 28 and **Graph 9** present trends in access to HIV counselling and testing. The number who said they had access to VCT services remained almost the same at slightly over 92 percent between 2000 and 2006. The proportion of those who said they had tested for HIV and received their HIV test result declined from 30 percent in 2000 to almost 21 percent in 2006.

Graph 9: Access and Use of VCT Services.



There was a non-statistically significant change in the proportion reporting access to confidential HIV testing between 2000 and 2006 in Livingstone and in Chirundu. But the proportion of respondents in Livingstone who had ever been tested declined statistically significantly from 36.0 percent to 17.2 ($p=0.002$) percent. In Chirundu the decline was from 31.1 percent to 23.3 percent ($p=0.002$). The proportion who got tested and found out their HIV test results increased statistically significantly ($p=0.013$) in Chirundu and not statistically significantly in Livingstone ($p=0.170$).

Table 28: Trends in Access to HIV Counseling and Testing among LDTDs by Site

Characteristics	LIVINGSTONE				CHIRUNDU			
	BSS2000 n (%)	BSS2003 n (%)	BSS2006 n (%)	p-value	BS2000 n (%)	BS2003 n (%)	BSS2006 n (%)	p-value
Access to a confidential HIV test in community				0.519				0.197
Yes	245 (89.7)	90 (70.3)	160 (89.4)		275 (95.2)	364 (80.0)	654 (93.6)	
Total	273	128	179		289	456	699	
Ever been tested for HIV				0.001				0.002
Yes	98 (36.0)	65 (50.8)	31 (17.2)		90 (31.1)	151 (33.1)	163 (23.3)	
Total	272	128	180		289	456	700	
Found out HIV test result				0.170				0.013
Yes	88 (89.8)	43 (95.6)	26 (96.3)		82 (91.1)	138 (92.6)	155 (98.1)	
Total	98	45	27		90	149	158	

9 DISCUSSION

The COH Zambia has used BSS to track behavior relevant to the spread of HIV among populations at a higher risk of HIV transmission using indicators that register change over time as a result of project activities and interventions. These indicators conform to some in the Zambia Sexual Behavior Surveys and the Zambia Demographic Health Surveys and UNAIDS behavioral indicators.

The findings of the 2006 BSS, like those of its predecessors, still present formidable challenges to the current and future efforts to arrest the spread of HIV/AIDS. The trend data results show an increase in proportion of the truck drivers who used drugs (mainly dagga) between 2000 and 2006 survey period and no appreciable change in the daily use of alcohol during the same period. The project did not directly intervene with alcohol use, an aspect that needs to be addressed because alcohol use and abuse is directly linked to risky sexual behavior and therefore an indirect contributor to HIV transmission (Fritz et al, 2002). Therefore HIV prevention programs such as COH should add on strategies for reducing levels of alcohol abuse in general and enhancing protective sexual behaviors among the alcohol using population (Morojele et al, 2006).

Though positive trends have been recorded in terms of reduction in extramarital sexual relationship, there is still presence of very highly active truck drivers engaging in high risk sexual behavior with different sex partners. Therefore behavior change efforts should continue targeting these populations and different populations of women who are partners to these men.

It is quite evident from the results presented above that although knowledge about HIV/AIDS and condoms is virtually universal, only about half of the respondents reported having ever used a condom and most of them still engage in high-risk sexual behaviors that facilitate the spread of HIV. Although it is encouraging to note that the proportion of truck drivers who did not have sexual encounters with commercial sex workers and other non-marital sex partners declined significantly, consistent condom use with commercial workers declined significantly during the period under review among those who had sex with commercial sex workers. The spread of the HIV infection does not only depend on the number or type of partners someone has but also on the behaviors of these partners and their partners leading to an emerging network of interconnections of sex partners. Men with different sex partners might be linked by a chain of sexual relationships through which infections may pass facilitating the spread of the disease (Hans-Peter 2006).

While knowledge of HIV/AIDS and its modes of transmission and that of condoms is almost universal among the study population (probably a reflection of high levels of education--over 75% have secondary or higher), results of this study still present gaps in translating this knowledge into the behaviors necessary to curb the spread of HIV.

Another worrisome finding is the continued existence of misconceptions associated with HIV transmission and prevention which are detrimental to control efforts. As demonstrated by this study, an increasing number of long distance truck drivers believe that HIV can be transmitted through mosquito bites and through sharing a

meal with an HIV-positive individual. With regard to prevention, it is saddening to note that more than half of long distance truck drivers believed that ARVs can prevent HIV. This misconception, coupled with the observed decline in the proportions of truck drivers who knew that abstinence and faithfulness can prevent HIV transmission, may lead to unsafe sexual behavior that ultimately can frustrate efforts directed at stemming the spread of HIV/AIDS.

What is perhaps the most worrisome is the fact that most of the LDTDs interviewed do not even know their HIV status as demonstrated by the low number who have undergone HIV counselling and testing. In fact, the number receiving VCT declined during the period under review. And yet very few of them consistently use condoms with their wives. The decline in the VCT up-take may be attributable to the decline in the proportions of truck drivers who reported access to confidential HIV testing in their communities during the review period. HIV counselling and testing is a critical component to the HIV prevention strategies, therefore regional efforts and innovations are needed to strengthen this aspect among the mobile populations.

10 RECOMMENDATIONS

- 1 In the absence of a cure and besides abstinence and faithfulness to one equally faithful partner, condom use is the most effective means of prevention against HIV/AIDS and other STIs. Yet this study has revealed that condom use in both marital and extra marital relationships among long distance truck drivers, and indeed among the general Zambian population, is not yet popular as it is still below desirable levels. Since acceptability and use of condoms depends on various attitudes and beliefs shaped by culture and tradition, and most of these have already been documented, the challenge now is to come up with innovative ways of dismantling them. In the meantime, research into an alternative to the condom as an HIV prevention tool should be encouraged and supported.
- 2 The finding that only about 37 percent and 2 percent of truck drivers mentioned peer educators and COH facilities, respectively, as sources of condoms suggests an urgent need to come up with innovative ways to reach out to this highly mobile and vulnerable group of men. Access to condoms by the men must continue to be improved and peer educators must play a key role as the most convenient suppliers of condoms.
- 3 Documented evidence exists to demonstrate the fact that drug abuse tends to lead to behavior that may increase the spread of HIV/AIDS. This is because drug abuse leads to defective perception and irrational or poor judgment. In view of the findings from this survey, program managers must begin to seriously analyse and understand substance use among the high-risk male populations at border posts and other targeted areas.
- 4 HIV testing and receiving the result is a critical entry point to the continuum of HIV prevention and care. Given the low and declining levels of VCT up-take reported by the respondents, it is necessary not only to scale up provision of such services but also to investigate the existing obstacles to VCT up-take

among truck drivers. This should be combined with efforts to correct the dangerous belief among many truck drivers that ARVs can prevent HIV infection.

- 5 In view of continued existence of some misconceptions about HIV transmission, there is need to develop better ways and strategies for correcting these misconceptions.

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APPENDIX: QUESTIONNAIRE

QUESTIONNAIRE

FAMILY HEALTH INTERNATIONAL (FHI) HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEYS (BSS) FOR USE WITH LONG DISTANCE TRUCK DRIVERS (LDTD)

Chirundu, Kapiri Mposhi and Livingstone BSS ZAMBIA 2005

Introduction: “My name is..... I’m working for the Corridors of Hope project and Family Health International (FHI). We are interviewing people here in [name of town, province or site] in order to find out about peoples HIV/AIDS knowledge, attitudes and risk behavior. Have you been interviewed in the past few days or week for this study in any of the three places, Chirundu, Kapiri Mposhi or Livingstone/Kazungula? **IF THE RESPONDENT HAS BEEN INTERVIEWED BEFORE DURING THIS ROUND OF BSS, DO NOT INTERVIEW THIS PERSON AGAIN BUT RECORD HIM IN YOUR BOOK. TELL THEM YOU CANNOT INTERVIEW THEM A SECOND TIME. THANK THEM AND END THE INTERVIEW. IF THEY HAVE NOT BEEN INTERVIEWED BEFORE, CONTINUE: GET CONSENT USING THE STANDARD CONSENT FORM.**

001 QUESTIONNAIRE IDENTIFICATION NUMBER |_|_|_|_|_|_|_|_|

002 PROFESSIONAL CATERGORY OF RESPONDENT: _____

003 TOWN _____

004 PROVINCE _____

005 PLACE OF INTERVIEW: 1. Truck Stop 2. CBI drop in centre
3. Others (Specify) _____

006 CLUSTER/ZONE: _____

007 INTERVIEWER: Code [|_|_|] Name _____

008 DATE INTERVIEW: __ \ ___ \ ___
D \ M \ Year

009 TOTAL TIME USED _____

010 EDITORS CODE [|_|_|]

CHECKED BY EDITOR: Signature _____ Date _____

The ADULT questionnaire includes the following sections:

Section 0 – Questionnaire identification data (6 codes)	
Section 1 – Background characteristics	17 questions
Section 2 – Marriage	4 questions
Section 3 – Sexual history: numbers and types of partners	3 questions
Section 4 – Sexual history: regular partner’s	12 questions
Section 5 – Sexual history: non-regular partners	6 questions
Section 6 – Sexual history: commercial partners	13 questions
Section 7 – Male and female condoms	13 questions
Section 8 – STDs	9 questions
Section 9 – Knowledge, opinions, and attitudes towards HIV/AIDS	18 questions
Section 10 – Exposure to prevention	10 questions
TOTAL NUMBER OF QUESTIONS	105 Questions

FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS

Section 1: Background characteristics

No.	Questions and filters	Coding categories	Skip to
Q100	TIME INTERVIEW STARTED		
Q101	In what month and year were you born?	MONTH [][] DON'T KNOW MONTH 88 NO RESPONSE 99 YEAR [][] DON'T KNOW YEAR 88 NO RESPONSE 99	
Q102	How old were you at your last birthday? (COMPARE AND CORRECT Q102 IF NEEDED)	AGE IN COMPLETED YEARS [][] DON'T KNOW 88 NO RESPONSE 99 ESTIMATE BEST ANSWER	
Q103	Have you ever attended school?	YES 1 NO 2 NO RESPONSE 99	→Q106 →Q106
Q104	What is the highest level of school you completed: primary, secondary or higher? CIRCLE ONE	PRIMARY 1 SECONDARY 2 HIGHER 3 NO RESPONSE 99	
Q105	How many total years of education have you completed up to now?	# YEARS COMPLETED [][] NO RESPONSE 99	
Q106	What is your religion? CIRCLE ONE	Christian 1 Muslim 2 Buddhist 3 Hindu 4 Other (specify)----- 6 NO RELIGION 0	→Q108 →Q108 →Q108 →Q108 →Q108
Q107	What is your Christian denomination or church?	NO RESPONSE 99 Catholic 1 United Church of Zambia 2 Seventh Day Adventist 3 Reformed Church in Zambia 4 Pentecostal 5 Anglican 6 Jehovah Witness 7 Others (specify)_____ 8	→Q108
Q108	How long have you stayed here at this site/border? (days/months/years)	days _____ months _____ Years _____	
Q109	FILTER CHECK Q110 TO Q115 FOR TRUCK DRIVERS AND MINI/BUS/LIGHT TRUCK DRIVERS ONLY.... []	NON DRIVER (UNIFORMED PERSONNEL) []	→Q117
Q110	How many times have you come through this border/site in the past 3 months, that is since the beginning of last February 2003(ESTIMATION FOR MINIBUS/BUS/LIGHT TRUCK DRIVERS	NUMBER OF TIMES SINCE LAST [][] DON'T KNOW 88 NO RESPONSE 99	
Q111	How long did you stay last time you were at this border/site?	DURATION IN DAYS [][] DON'T KNOW 88 NO RESPONSE 99	
Q112	How long do you usually stay at this border/site	DURATION IN DAYS [][] DON'T KNOW 88 NO RESPONSE 99	
Q113	In which country is you or your company based? (if trucker base of truck company) CIRCLE ONE	South Africa 1 Somalia 2 Malawi 3 Zimbabwe 4	

No.	Questions and filters	Coding categories	Skip to																														
		Tanzania 5 Kenya 6 Mozambique 7 Congo DR 8 Botswana 10 Zambia 11 OTHER----- 12 NO RESPONSE 9																															
Q114	Where do you reside when you are not travelling? RESPONDENT TO PICK ONLY ONE	South Africa 1 Somalia 2 Malawi 3 Zimbabwe 4 Tanzania 5 Kenya 6 Mozambique 7 Congo DR 8 Botswana 10 Zambia 11 OTHER----- 12 NO RESPONSE 99																															
Q115	What is your country of origin?	South Africa 1 Somalia 2 Malawi 3 Zimbabwe 4 Tanzania 5 Kenya 6 Mozambique 7 Congo DR 8 Botswana 10 Zambia 11 OTHER----- 12 NO RESPONSE 99																															
Q116	What other occupation apart from driving do you do?	NONE 1 OTHER (specify) _____2																															
Q117	During the last 4 weeks how often have you had drinks containing alcohol? Would you say READ OUT CIRCLE ONE	Every day 1 At least once a week 2 Less than once a week 3 Never 4 DON'T KNOW 88 NO RESPONSE 99																															
Q118	Some people have tried a range of different types of drugs. Which of the following, if any, have you tried? Any other? READ LIST	<table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> <th>DK</th> <th>NR</th> </tr> </thead> <tbody> <tr> <td>Daga (Ichamba)</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>Heroin</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>Cocaine</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>Mandrax</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>Other-----</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> </tbody> </table>		YES	NO	DK	NR	Daga (Ichamba)	1	2	88	99	Heroin	1	2	88	99	Cocaine	1	2	88	99	Mandrax	1	2	88	99	Other-----	1	2	88	99	IF NO DK NR → Q201
	YES	NO	DK	NR																													
Daga (Ichamba)	1	2	88	99																													
Heroin	1	2	88	99																													
Cocaine	1	2	88	99																													
Mandrax	1	2	88	99																													
Other-----	1	2	88	99																													
Q119	IF EVER TRIED ANY OF THE DRUGS During the last 4 weeks, would you say you took the above drug 1-everyday 2-at least once a week 3-less than once a week or 4- never	<table border="0"> <tbody> <tr> <td>Daga (Ichamba)</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>99</td> </tr> <tr> <td>Heroin</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>99</td> </tr> <tr> <td>Cocaine</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>99</td> </tr> <tr> <td>Mandrax</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>99</td> </tr> <tr> <td>Other -----</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>99</td> </tr> </tbody> </table>	Daga (Ichamba)	1	2	3	4	99	Heroin	1	2	3	4	99	Cocaine	1	2	3	4	99	Mandrax	1	2	3	4	99	Other -----	1	2	3	4	99	
Daga (Ichamba)	1	2	3	4	99																												
Heroin	1	2	3	4	99																												
Cocaine	1	2	3	4	99																												
Mandrax	1	2	3	4	99																												
Other -----	1	2	3	4	99																												

FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS
Section 2 Marriage and live-in partnerships

No.	Questions and filters	Coding categories	Skip to
Q201	Have you <i>ever</i> been married?	YES 1 NO 2 NO RESPONSE 99	→ Q203 → Q203
Q202	How old were you when you first married?	Age in years [__ __] DON'T KNOW 88 NO RESPONSE 99	
Q203	What is your current marital relationship? (PROBE IF RESPONSE NOT CLEAR)	currently married, living with spouse currently married, living with other sexual partner currently married, not living with spouse or any other sexual partner not married, living with sexual partner not married, not living with sexual partner NO RESPONSE	1 2 → 3 Q301 4 → 5 Q301 99
Q204	IF MARRIED: Do you have more than one wife?	YES 1 NO 2 NO RESPONSE 99	

FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS
Section 3 Sexual history: numbers and types of partners

Now I'd like to ask you some questions that *may be difficult and personal*. But as I said at the beginning, your answers to these questions will be treated with strict confidentiality and will not be linked to you in any way. The questions that will follow will all be about your sexual activities and partners...

No.	Questions and filters	Coding categories	Skip to
Q301	Have you ever had sexual intercourse? [For the purposes of this survey, "sexual intercourse" is defined as vaginal or anal sex]	YES 1 NO 2 NO RESPONSE 99	→Q801
Q302	At what age did you first have sexual intercourse?	AGE IN YEARS [__ __] DON'T KNOW 88 NO RESPONSE 99	
Q303	Have you had sexual intercourse in the last 12 months? That is since last April last year	YES 1 NO 2 NO RESPONSE 99	→Q801
Q304	Think about <i>sexual</i> partners you've had in the last 12 months. How many are: a) your wife (s) b) living in partner c) girl friend not living with you (regular) d) someone paid for sex (commercial) e) non-regular, non-commercial (casual)	WIVES [__ __] NO RESPONSE 99 LIVING IN PARTNER [__ __] DON'T KNOW 88 NO RESPONSE GIRL FRIEND [__ __] NO RESPONSE 99 PAID FOR SEX [__ __] DON'T KNOW 88 NO RESPONSE 99 CASUAL [__ __] DON'T KNOW 88 NO RESPONSE 99	

2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS
Section 4 Sexual history: regular partners

No.	Questions and Filters	Coding categories	Skip to
Q401	FILTER: CHECK Q304a HAD SEX WITH WIFE OR LIVING IN PARTNER DURING <u>PAST 12 MONTHS</u> [___] ↓	DID NOT HAVE SEX WITH WIFE OR LIVING IN PARTNER DURING <u>PAST 12 MONTHS</u> [___]→	Q501
Q402	If married How many times did you have sexual intercourse with your wife over the last 30 days? <i>That is since the beginning of April this year</i>	Number of times [__][__] NO WIFE 77 DON'T KNOW 88 NO RESPONSE 99	→Q407
Q403	The last time you had sex with wife; did you and your wife use a condom?	YES 1 NO 2 DON'T REMEMBER 88 NO RESPONSE 99	→Q405 →Q406 →Q406
Q404	Who suggested condom use that time? CIRCLE ONE	Myself 1 Wife 2 Joint decision 3 NO RESPONSE 99	→Q406 →Q406 →Q406 →Q406
Q405	Why didn't you and your wife use a condom that time? Any other reasons? DO NOT READ CIRCLE ALL ANSWERS MENTIONED	Not available N Y Too expensive 1 2 Partner objected 1 2 Don't like them 1 2 Used other contraceptive 1 2 Didn't think it was necessary 1 2 Didn't think of it 1 2 itching 1 2 Other _____ 1 2 DON'T KNOW 1 2 NO RESPONSE 1 2	
Q406	In general, how often did you and your wife (s) use a condom during the past 12 months? <i>That is since last April 2002----</i> Would you say every time, almost every time, sometimes or never?	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99	
Q407	Do you have a live in partner, meaning a sexual partner living with you but not married to you? CHECK Q304b	YES 1 NO 2 NO RESPONSE 99	→Q501
Q408	If have live in partner How many times did you have sexual intercourse with your live in partner over the last 30 days? <i>That is since the beginning of April 2003</i>	Number of times [__][__] NO LIVE IN PARTNER 77 DON'T KNOW 88 NO RESPONSE 99	
Q409	The last time you had sex with a living in partner did you and your partner use a condom?	YES 1 NO 2 DON'T REMEMBER 8 NO RESPONSE 99	→Q411 →Q412 →Q412

Q410	Who suggested condom use that time? CIRCLE ONE	Myself My partner Joint decision NO RESPONSE	1 2 3 99	→Q412 →Q412 →Q412 →Q412
Q411	Why didn't you and your partner use a condom that time? Any other reasons? DO NOT READ LIST CIRCLE ALL ANSWERS MENTIONED	Not available Too expensive Partner objected Don't like them Used other contraceptive Didn't think it was necessary Didn't think of it itching Other _____ DON'T KNOW NO RESPONSE	N Y 1 2 1 2 1 2 1 2 1 2 1 2 1 2 2 2 2 2 88 99	
Q412	In general, how often did you and your live in partner(s) use a condom during the past 12 months? <i>That is since last April last year</i> Would you say every time, almost every time, sometimes or never?	EVERY TIME ALMOST EVERY TIME SOMETIMES NEVER DON'T KNOW NO RESPONSE	1 2 3 4 88 99	

FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS
Section 5 Sexual history: GIRLFRIEND/ REGULAR partners

No.	Questions and Filters	Coding categories	Skip to
Q501	FILTER: CHECK Q304c HAD SEXUAL INTERCOURSE WITH A GIRL FRIEND (REGULAR/NOT LIVING TOGETHER) IN <u>LAST 12 MONTHS</u> ...[___] ↓	HAS NOT <i>HAD</i> SEXUAL INTERCOURSE WITH A GIRL FRIEND (REGULAR/NOT LIVING TOGETHER) IN <u>LAST 12 MONTHS</u> [___]→	→Q601
Q502	Think about your most recent girl friend (<i>someone you are not living together</i>). How many times did you have sexual intercourse with this person over the last 30 days? <i>That is since the beginning o April this year</i>	Number of times DON'T KNOW NO RESPONSE	[][] 88 99
Q503	The last time you had sex with a girl friend (<i>someone you are not living together</i>), did you and your partner use a condom?	YES NO DON'T KNOW NO RESPONSE	1 2 88 99 →Q505 →Q506 →Q506
Q504	Who suggested condom use that time? CIRCLE ONE	Myself My partner Joint decision NO RESPONSE	1 2 3 99 →Q506 →Q506 →Q506 →Q506
Q505	Why didn't you and your partner use a condom that time? CIRCLE ALL ANSWERS MENTIONED	Not available Too expensive Partner objected Don't like them Used other contraceptive Didn't think it was necessary Didn't think of it Could reduce the pleasure Other _____ DON'T KNOW NO RESPONSE	Y N 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 88 99

Q506	In general, how often did you and your girl friend (<i>someone you are not living together</i>) use a condom during the past 12 months? <i>That is since Beginning of April last year-</i>	EVERY TIME	1	
		ALMOST EVERY TIME	2	
		SOMETIMES	3	
		NEVER	4	
	Would you say every time, almost every time, sometimes, or never?	DON'T KNOW	88	
		NO RESPONSE	99	

FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS
Section 6 Sexual history: COMMERCIAL/PAY sexual partners

No.	Questions and Filters	Coding categories	6.7.1.1.1.1
Q601	FILTER: CHECK Q304d HAD SEX WITH COMMERCIAL SEX WORKERS OR SOMEONE YOU EXCHANGED MONEY OR GIFT FOR SEX) DURING <u>LAST 12 MONTHS</u> [] ↓	DID NOT HAVE SEX WITH COMMERCIAL OR SOMEONE YOU EXCHANGED MONEY OR GIFT FOR SEX DURING <u>LAST 12 MONTHS</u> []→	→Q608
Q602	Think about your most recent commercial sexual partner. How many times did you have sexual intercourse with this person over the last 30 days? <i>That is since the beginning of April this year-</i>	Number of times [] DON'T KNOW 88 NO RESPONSE 99	
Q603	The last time you had sex with a commercial partner; did you and your partner use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	→Q605 →Q606 →Q606
Q604	Who suggested condom use that time? CIRCLE ONE	Myself 1 My partner 2 Joint decision 3 DON'T KNOW 88 NO RESPONSE 99	→Q606 →Q606 →Q606 →Q606
Q605	Why didn't you and your partner use a condom that time? ADD OTHER LOCALLY APPROPRIATE CATEGORIES AFTER PRE-TESTING CIRCLE ALL ANSWERS MENTIONED	Y N Not available 1 2 Too expensive 1 2 Partner objected 1 2 Don't like them 1 2 Used other contraceptive 1 2 Didn't think it was necessary 1 2 Didn't think of it 1 2 Other _____ 1 2 DON'T KNOW 88 NO RESPONSE 99	
Q606	In general, how often did you and your commercial/paying partner(s) use a condom during the past 12 months? <i>That is since last April 2002</i> Would you say every time, almost every time, sometimes, or never?	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99	
Q607	Did you have sex with any other kind of partner in last 12 months (non-commercial/pay partner either spouse/live in partner)	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 4	→Q701 →Q701

Q608	FILTER: CHECK Q304e IF HAD SEX WITH NON-REGULAR/NON-COMMERCIAL PARTNER DURING <u>PAST 12 MONTHS</u> [___] ↓	DID NOT HAVE SEX WITH NON-REGULAR /NON-COMMERCIAL PARTNER DURING <u>PAST 12 MONTHS</u> [___]→	→Q701
Q609	Think about your most recent other kind of sexual partner (non-regular and non-commercial) . How many times did you have sexual intercourse with this person over the last 30 days? <i>That is since the beginning of April 2003</i>	Number of times [___] DON'T KNOW 88 NO RESPONSE 99	
Q610	The last time you had sex with other kind of sexual partner ; did you and your partner use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	→Q612 →Q613 →Q613
Q611	Who suggested condom use that time? CIRCLE ONE	Myself 1 My partner 2 Joint decision 3 DON'T KNOW 88 NO RESPONSE 99	→Q613 →Q613 →Q613 →Q613 →Q613
Q612	Why didn't you and your partner use a condom that time? ADD OTHER LOCALLY APPROPRIATE CATEGORIES AFTER PRE-TESTING CIRCLE ALL ANSWERS MENTIONED	Y N Not available 1 2 Too expensive 1 2 Partner objected 1 2 Don't like them 1 2 Used other contraceptive 1 2 Didn't think it was necessary 1 2 Didn't think of it 1 2 Other _____ 1 2 DON'T KNOW 88 NO RESPONSE 99	
Q613	In general, how often did you and other kind of sexual partner (s) use a condom during the past 12 months? <i>That is since last April last year-</i> Would you say every time, almost every time, sometimes, or never?	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99	

FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS
Section 7 Condoms

No.	Questions and Filters	Coding categories	Skip to
Q701	FILTER: SEE Q403, Q409, Q503, Q603, Q610 CONDOMS NOT USED..... [___] ↓	CONDOMS USED [___]→	→Q704
Q702	Have you and a sexual partner <i>ever</i> used a male condom? (Show picture or sample of one.) (The respondent may not have used a condom with partners in sections 4-6, but may have used a condom at some other time in the past.)	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	

Q703	Have you ever heard of a male condom? (Show picture or sample of one) (I mean a rubber object that a man puts on his penis before sex.)	YES NO DON'T KNOW NO RESPONSE	1 2 88 99	
Q704	Have you ever bought a condom?	YES NO NO RESPONSE	1 2 99	→Q707
Q705	Last time you bought condom, which brand was it?	Maximum Lovers plus Care Protector Success Others (specify)-----	1 2 3 4 5 6	
Q706	Last time you bought condoms, how much did you spend?		ZK_____ DON'T KNOW 88	
Q707	How many condoms do you have on you now or do you have accessible for use? Would you please show them to me?	Number of condoms NONE NO RESPONSE	_ _ _ 88 99	
Q708	Do you know of any place or person from which you can obtain male condoms?	YES NO NO RESPONSE	1 2 99	
Q709	Which places or persons do you know where you can obtain male condoms? Any others? PROBE AND RECORD ALL ANSWERS	Shop Pharmacy Market Clinic Hospital Family planning centre Bar/guest house/hotel Peer educator Friend OTHER_____ NO RESPONSE	Yes No 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 99	
Q710	How long would it take you to obtain a condom (male or female) close to your house or to where you work?	Under 15 Mins 15 to 30 Mins 31 to 60 Mins More than 60 Mins DON'T KNOW NO RESPONSE	1 2 3 4 88 99	
Q711	FOR SEXUALLY ACTIVE RESPONDENTS ONLY CHECK Q302 During the past 12 months, did you ever have sexual intercourse <i>without</i> using a condom with any sexual partner other than your wife?	YES NO DON'T KNOW NO RESPONSE	1 2 88 99	→Q713
Q712	Why didn't you and your partner use a condom that time? ADD OTHER LOCALLY APPROPRIATE CATEGORIES AFTER PRE-TESTING. CIRCLE ALL ANSWERS MENTIONED.	Not available Too expensive Partner objected Don't like them Used other contraceptive Didn't think it was necessary Didn't think of it Wanted pregnancy Didn't think partner had a disease Other_____ DON'T KNOW NO RESPONSE	Y N 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 88 99	

Q713	Have you ever heard of a female condom? (Show picture or sample of one.)	YES 1 NO 2 DON'T KNOW 8 NO RESPONSE 9	→Q801 →Q801																																										
Q714	Have you <i>ever</i> used a female condom? (Show picture or sample of one.)	YES 1 NO 2 DON'T KNOW 8 NO RESPONSE 9																																											
Q715	Do you know of any place or person from which you can obtain female condoms?	YES 1 NO 2 NO RESPONSE 9																																											
Q716	Where would you feel most comfortable buying female condoms? Where do you prefer to buy condoms? (Read list)	<table border="0"> <tr> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Shop</td> <td>1</td> <td>2</td> </tr> <tr> <td>Pharmacy</td> <td>1</td> <td>2</td> </tr> <tr> <td>Market</td> <td>1</td> <td>2</td> </tr> <tr> <td>Clinic</td> <td>1</td> <td>2</td> </tr> <tr> <td>Hospital</td> <td>1</td> <td>2</td> </tr> <tr> <td>Family planning centre</td> <td>1</td> <td>2</td> </tr> <tr> <td>Bar/guest house/hotel</td> <td></td> <td></td> </tr> <tr> <td>Peer educator</td> <td>1</td> <td>2</td> </tr> <tr> <td>Friend</td> <td>1</td> <td>2</td> </tr> <tr> <td>Other _____</td> <td>1</td> <td>2</td> </tr> <tr> <td>NO RESPONSE</td> <td>1</td> <td>2</td> </tr> <tr> <td></td> <td>1</td> <td>2</td> </tr> <tr> <td></td> <td>99</td> <td></td> </tr> </table>		Yes	No	Shop	1	2	Pharmacy	1	2	Market	1	2	Clinic	1	2	Hospital	1	2	Family planning centre	1	2	Bar/guest house/hotel			Peer educator	1	2	Friend	1	2	Other _____	1	2	NO RESPONSE	1	2		1	2		99		
	Yes	No																																											
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	99																																												

2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS
Section 8 STDs

No.	Questions and filters	Coding categories	Skip to																														
Q801	Have you ever heard of diseases that can be passed through sexual intercourse?	YES 1 NO 2 NO RESPONSE 99	→Q804																														
Q802	Can you describe any symptoms of STDs in men? Any others? DO <u>NOT</u> READ OUT THE SYMPTOMS CIRCLE 1 FOR ALL MENTIONED. CIRCLE 2 FOR ALL <i>NOT</i> MENTIONED. MORE THAN ONE ANSWER IS POSSIBLE.	<table border="0"> <tr> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td>GENITAL DISCHARGE</td> <td>1</td> <td>2</td> </tr> <tr> <td>BURNING PAIN ON URINATION</td> <td>1</td> <td>2</td> </tr> <tr> <td>GENITAL ULCERS/SORES</td> <td>1</td> <td>2</td> </tr> <tr> <td>SWELLINGS IN GROIN AREA</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER _____</td> <td>1</td> <td>2</td> </tr> <tr> <td>NO RESPONSE</td> <td>1</td> <td>2</td> </tr> </table>		Yes	No	GENITAL DISCHARGE	1	2	BURNING PAIN ON URINATION	1	2	GENITAL ULCERS/SORES	1	2	SWELLINGS IN GROIN AREA	1	2	OTHER _____	1	2	NO RESPONSE	1	2										
	Yes	No																															
GENITAL DISCHARGE	1	2																															
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OTHER _____	1	2																															
NO RESPONSE	1	2																															
Q803	Can you describe any symptoms of STDs in women? Any others? DO <u>NOT</u> READ OUT THE SYMPTOMS CIRCLE 1 FOR ALL MENTIONED. CIRCLE 2 FOR ALL <i>NOT</i> MENTIONED. MORE THAN ONE ANSWER IS POSSIBLE.	<table border="0"> <tr> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td>ABDOMINAL PAIN</td> <td>1</td> <td>2</td> </tr> <tr> <td>GENITAL DISCHARGE</td> <td>1</td> <td>2</td> </tr> <tr> <td>FOUL SMELLING DISCHARGE</td> <td>1</td> <td>2</td> </tr> <tr> <td>BURNING PAIN ON URINATION</td> <td>1</td> <td>2</td> </tr> <tr> <td>GENITAL ULCERS/SORES</td> <td>1</td> <td>2</td> </tr> <tr> <td>SWELLINGS IN GROIN AREA</td> <td>1</td> <td>2</td> </tr> <tr> <td>ITCHING</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER _____</td> <td>1</td> <td>2</td> </tr> <tr> <td>NO RESPONSE</td> <td></td> <td>99</td> </tr> </table>		Yes	No	ABDOMINAL PAIN	1	2	GENITAL DISCHARGE	1	2	FOUL SMELLING DISCHARGE	1	2	BURNING PAIN ON URINATION	1	2	GENITAL ULCERS/SORES	1	2	SWELLINGS IN GROIN AREA	1	2	ITCHING	1	2	OTHER _____	1	2	NO RESPONSE		99	
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ITCHING	1	2																															
OTHER _____	1	2																															
NO RESPONSE		99																															

Q804	Have you had leakage (genital discharge) during the past 12 months? <i>That is since April last year</i>	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q805	How many times or separate episodes of genital discharge have you had in past 12 months?	ONCE 1 TWICE 2 MORE THAN THREE 3 NEVER 4	
Q806	Have you had a genital ulcer/sore during the past 12 months?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q807	How many times or separate episodes of genital sore/ulcers on private parts have you had in past 12 months? FILTER CHECK Q804 AND Q806 HAD DISCHARGE OR SORE IN THE LAST 12 MONTHS <input type="checkbox"/>	ONCE 1 TWICE 2 MORE THAN THREE 3 NEVER 4 NO DISCHARGE OR ULCER <input type="checkbox"/> → IN LAST 12 MONTHS	→Q901
Q808	The last time you had a genital ulcer / sore or discharge: did you do any of the following? READ OUT: MORE THAN ONE ANSWER IS POSSIBLE.	YES NO	
	a. Seek advice/medicine from a government clinic or hospital?	1 2	
	b. Seek advice/medicine from a workplace clinic or hospital?	1 2	
	c. Seek advice /medicine from a church or charity- run clinic or hospital?	1 2	
	d. Seek medicine from a private clinic or hospital?	1 2	
	e. Seek advice/medicine from a chemist?	1 2	
	f. Seek advice/ medicine from a traditional healer?	1 2	
	g. Bought capsules on the street?	1 2	
	h. Took medicine you had at home?	1 2	
	i. Seek treatment from CBI/blue house?	1 2	
	j. Stop having sex during the time when you had the symptoms?	1 2	
	k. Always use a condom when having sex during the time you had symptoms?	1 2	
	l. Tell your sexual partner about the discharge/STD?	1 2	

Q809	If yes to any of above (a-i) how long or how many days did it take between beginning of symptoms and seeking care?	NUMBER OF DAYS <input type="text"/> DON'T KNOW 88 NO RESPONSE 99	
Q810	Last time you had STD which was first source of treatment?	.Government hospital/clinic 1 .Work place clinic/hospital 2 .Sought treatment from private clinic 3 Sought medicine from traditional healer 4 Sought treatment from CBI/blue house.5 .Bought medicine from pharmacy/chemisty.6 Bought capsules from market .7 Others (specify)-----8	

FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS
Section 9 Knowledge, opinions, and attitudes

No.	Questions and filters	Coding categories	Skip to
Q901	Have you ever heard of HIV or the disease called AIDS?	YES 1 NO 2 NO RESPONSE 99	→Q1001
Q902	Do you know anyone who is infected with HIV or who has died of AIDS?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	→Q904
Q903	Do you have a close relative or close friend who is infected with HIV or who has died of AIDS?	YES, A CLOSE RELATIVE 1 YES, A CLOSE FRIEND 2 NO 3 NO RESPONSE 99	
Q904	Can people protect themselves from the HIV virus by using a condom correctly every time they have sex?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q905	Can a person get the HIV from Mosquito bites?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q906	Can people protect themselves from the HIV virus by having one faithful, non infected sex partner?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q907	Can people protect themselves from the HIV virus by abstaining (not having) from sexual intercourse?	YES 1 NO 2 DON'T KNOW 8 NO RESPONSE 9	
Q908	Can a person get the HIV virus by sharing a meal with someone who is infected?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q909	Can a person get the HIV by getting injections with a needle that was already used by someone else?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q910	Do you think that a healthy-looking person can be infected with HIV the virus that causes AIDS?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	

Q911	Can a pregnant woman infected with HIV or AIDS transmit the virus to her unborn child?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99																
Q912	Can a pregnant woman infected with HIV or AIDS pass the virus to her child at time of delivery (child birth)?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99																
Q913	Can a pregnant woman infected with HIV or AIDS pass the virus to her child through breastfeeding?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99																
Q914	What can a pregnant woman do to decrease the chance of passing HIV to her unborn child? DO NOT READ LIST CIRCLE ALL THAT ARE MENTIONED.	<table style="width: 100%; border: none;"> <tr> <td></td> <td style="text-align: right;">Yes</td> <td style="text-align: right;">No</td> </tr> <tr> <td>Take medication (Antiretroviral)</td> <td style="text-align: right;">1</td> <td style="text-align: right;">2</td> </tr> <tr> <td>OTHER _____</td> <td style="text-align: right;">1</td> <td style="text-align: right;">2</td> </tr> <tr> <td>DON'T KNOW</td> <td colspan="2" style="text-align: right;">88</td> </tr> <tr> <td>NO RESPONSE</td> <td colspan="2" style="text-align: right;">99</td> </tr> </table>		Yes	No	Take medication (Antiretroviral)	1	2	OTHER _____	1	2	DON'T KNOW	88		NO RESPONSE	99		
	Yes	No																
Take medication (Antiretroviral)	1	2																
OTHER _____	1	2																
DON'T KNOW	88																	
NO RESPONSE	99																	
Q915	Do you know of any hospital program that is offering mother to child transmission of HIV prevention services?	YES 1 NO 2 DON'T KNOW 8 NO RESPONSE 99																
Q916	Where are mother to child transmission prevention services offered in this site?	_____ _____ Don't know 88																
Q917	If a student has HIV but is not sick, should he or she be allowed to continue attending school?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99																
Q918	If a female relative of yours become ill with HIV, the virus that causes AIDS would you be willing to care for her in your household?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99																
Q919	If a teacher has HIV but is not sick, should he or she be allowed to continue teaching in school?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99																
Q920	If you knew a shopkeeper or food seller had the HIV virus, would you buy food from them?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99																
Q921	If a member of your family become ill with HIV, the virus that causes AIDS, would you want it to remain secret?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99																
Q922	Is it possible in your community for someone to get a confidential test to find out if they are infected with HIV? By confidential I mean that no one will know the result if you don't want them to know it.?	YES 1 NO 2 NO RESPONSE 9																
Q923	<i>Restate confidentiality statement</i> I don't want to know the result, but have you ever had an HIV test?	YES 1 NO 2 NO RESPONSE 9	If 2 skip to Q926															
Q924	Did you voluntarily undergo the HIV test, or were you required to have the test?	Voluntary 1 Required 2 NO RESPONSE 99																
Q925	Please do not tell me the result, but did you find out the result of your test?	YES 1 NO 2 NO RESPONSE 9																

Q926	Would you be interested in having an HIV test?	YES 1 NO 2 NO RESPONSE 9	If 1 skip to Q1001
Q927	Why would you not be interested in an HIV test?	SCARED 1 DON'T WANT TO KNOW 2 FEAR TO BE ISOLATED 3 THERE IS NO CURE FOR HIV 4 LACK OF CONFIDENTIALITY 5 OTHER SPECIFY-----5	

FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS
Section 10 Exposure to intervention

No.	Questions and filters	Coding categories	Skip to
Q1001	Do you know of any service sites that offer STI services?	YES 1 NO 2 NO RESPONSE 99	→Q1004 →Q1004
Q1002	What are the names of the places you know that offer STI services? (Probe with CBI/WVI/corridor of Hope project)	_____	IF NOT CBI GO TO 1004
Q1003	Have you ever talked to a staff member of CBI/WVI/Corridor of Hope project?	YES 1 NO 2 NO RESPONSE 99	
Q1004	Have you ever visited the drop-in centre/blue house for any reason?	YES 1 NO 2 NO RESPONSE 99	→Q1007
Q1005	Who introduced you to CBI/WVI/Corridor of Hope project?	PEER EDUCATOR (PE) 1 FRIEND WHO IS NOT PE 2 HEALTH CARE PROVIDER 3 OTHERS-----4	
Q1006	Last time you visited CBI/WVI/Corridor of Hope project where you given any information, or educational material?	YES 1 NO 2 NO RESPONSE 99	
Q1007	Which is your main source of information on STIs and HIV	Radio 1 Television 2 Friends 3 Health centre 4 CBI 5 Other specify _____6	
Q1008	Do you feel you have adequate information regarding STIs and HIV?	YES 1 NO 2 NO RESPONSE 99	
Q1009	At work do you have programs on HIV?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q1010	If you are found to have HIV would the company allow you to continue working?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q1011	Have you been asked same set of questions or interviewed in the past in any of the sites; Chirundu, Kapiri Mposhi, Livingstone or in Chipata	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	→Q1014
Q1012	Where you interviewed in 2000	YES 1 NO 2	
Q1013	Where you interviewed in 2003	YES 1 NO 2	
Q1014	Thank the participant		

That is the end of our questionnaire. Thank you very much for taking time to answer. We appreciate your help.